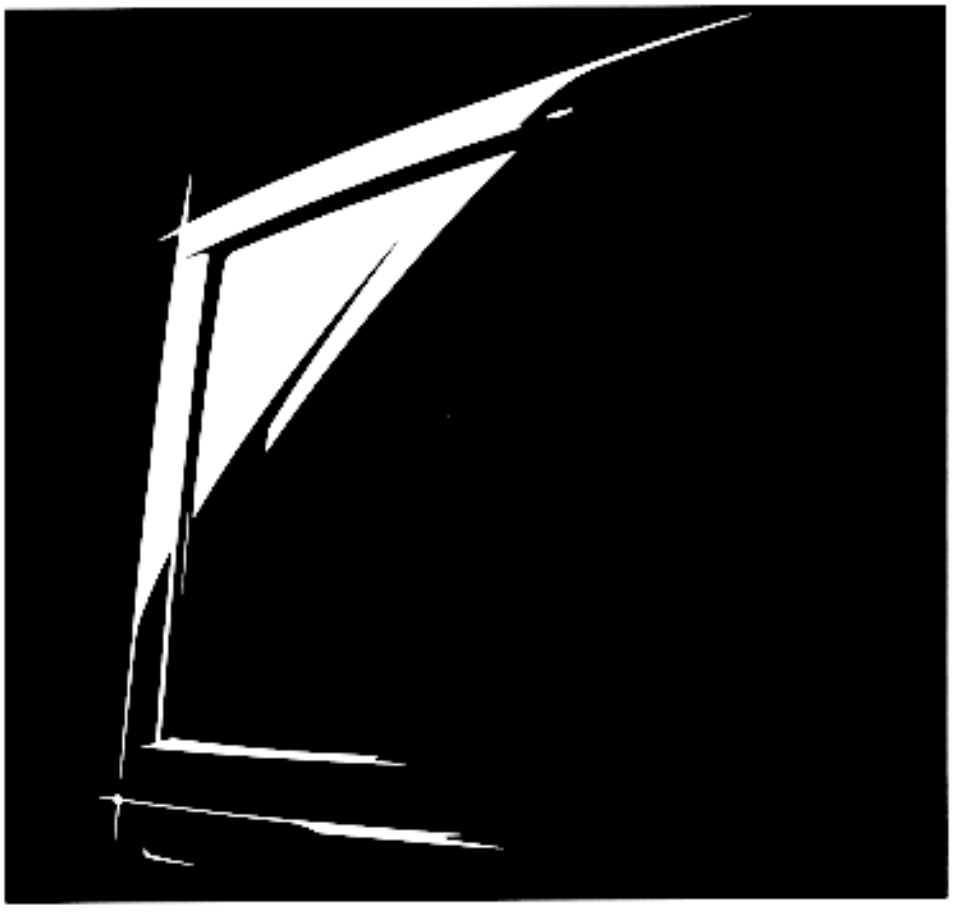
TOSHIBA

Color Television

OWNER'S MANUAL

CE35D10



Dear Customer

Congratulations! You have purchased one of the finest Color TV's on the market!
This manual will help you use the many exciting and useful features to make your TV viewing more enjoyable than ever before.
Before operating your TV set, please read all these safety and operating instructions completely and then retain for future reference.

Customer's Record

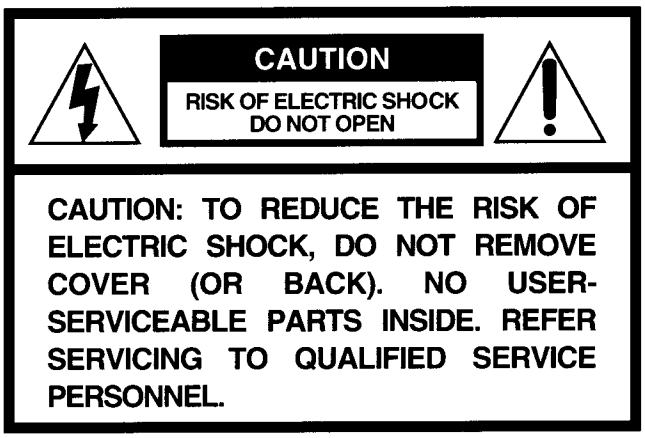
You will find the model number and serial number on the back of your TV set.
Record these numbers in the spaces provided below.
Refer to them whenever you call upon your TOSHIBA dealer regarding this product.

Model Number _____

Serial Number _____

SAFETY PRECAUTIONS

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning symbol in the triangle tells you that the voltage inside this product may be strong enough to cause an electric shock.
DO NOT TRY TO SERVICE THIS PRODUCT YOURSELF.

The exclamation point in the triangle tells you that important operating and maintenance instructions follow this symbol.

CAUTIONS:
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLET UNLESS THE PRONGS CAN BE FULLY INSERTED INTO THE OUTLET TO PREVENT ANY EXPOSURE OF THE PRONGS ON THE POLARIZED PLUG.

Avoid displaying stationary images on your TV screen for extended periods of time. Stationary patterns generated by computer displays, video games, stock market reports etc. can become permanently engrained on the picture tube. This damage is not protected by your warranty as it is the result of misuse. Should you wish to use your TOSHIBA Television to display still images, it is always advisable to reduce brightness and contrast settings. Never leave a video game or computer display unattended.

This TV set may be used only with TOSHIBA stand model ST3501. Use with other stands may result in instability causing possible injury.

NOTE TO CATV SYSTEM INSTALLER:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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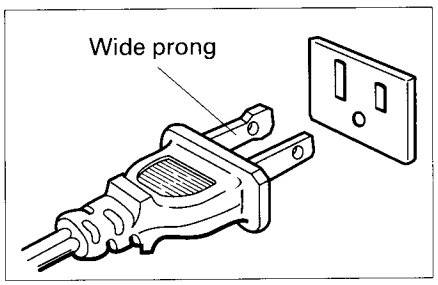
INSTALLING YOUR TV SET

WARNING:
TO AVOID INJURY TO A CHILD OR ADULT:
- Do not place the TV on an uneven floor or on unstable stand.
- Do not stand or climb on the TV.
- Do not put a VCR or any heavy object on top of the TV.

DO NOT:
- Place your TV set in a room where direct lighting strikes the screen.
- Place your TV set too close to a wall, in a confined area or in a very warm location.
- Change the plug's safety prong.

DO:
- Use soft and indirect lighting.
- Sit at least 6 feet away from the set.
- Provide normal air circulation for reliable long life.
- Plug into an electrical outlet with standard house power (120 volt AC, 60 Hz). DO NOT CHANGE THE SAFETY FEATURE OF THE PLUG.

CAUTION:
As a safety feature, the plug has one prong wider than the other. It will fit only one way into a standard electrical outlet. If the plug will not fit into the outlet, try turning it around. If the plug will not fit either way, the outlet is probably old and non-standard. You will need to have a new outlet installed by an electrician.



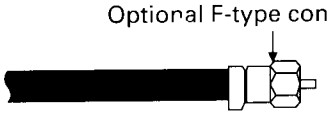
ANTENNA/CABLE TV GENERAL INFORMATION

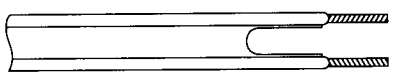
You can use either an indoor or outdoor antenna to receive VHF and/or UHF channels.
Channels 2-13 are VHF channels, and channels 14-69 are UHF channels.
We recommend using or outdoor antenna for better picture quality.
You can receive Cable TV by connecting a cable supplied by your local cable company.
Cable TV delivers both VHF and UHF channels and other channels not available from your antenna.

TYPES OF ANTENNA CABLES

Shown below are two basic types of antenna cables. Signals from a home antenna may be conducted through either type. Cable TV signals will always be conducted through 75 ohm coaxial cable.

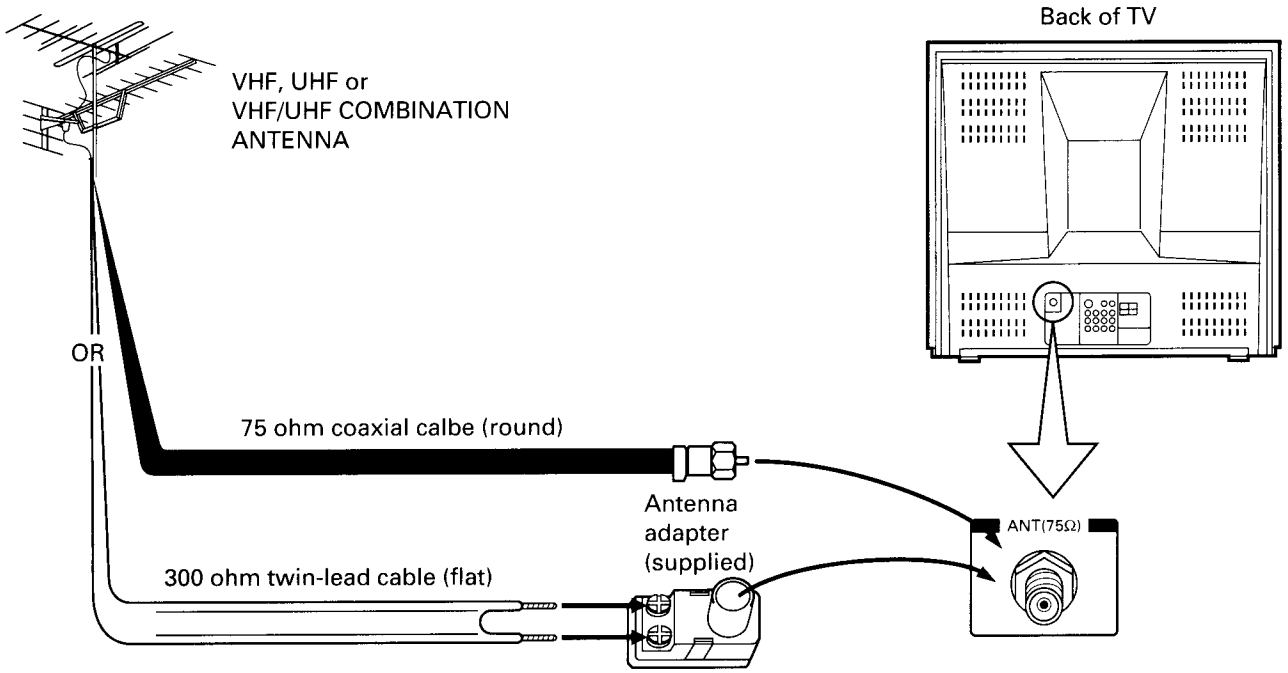
1. A 75 ohm system is generally a round cable with F-type connectors that can easily be attached to a terminal without tools.
2. A 300 ohm system is a flat "twin-lead" cable that can be attached to a terminal through an antenna adapter supplied as an accessory.



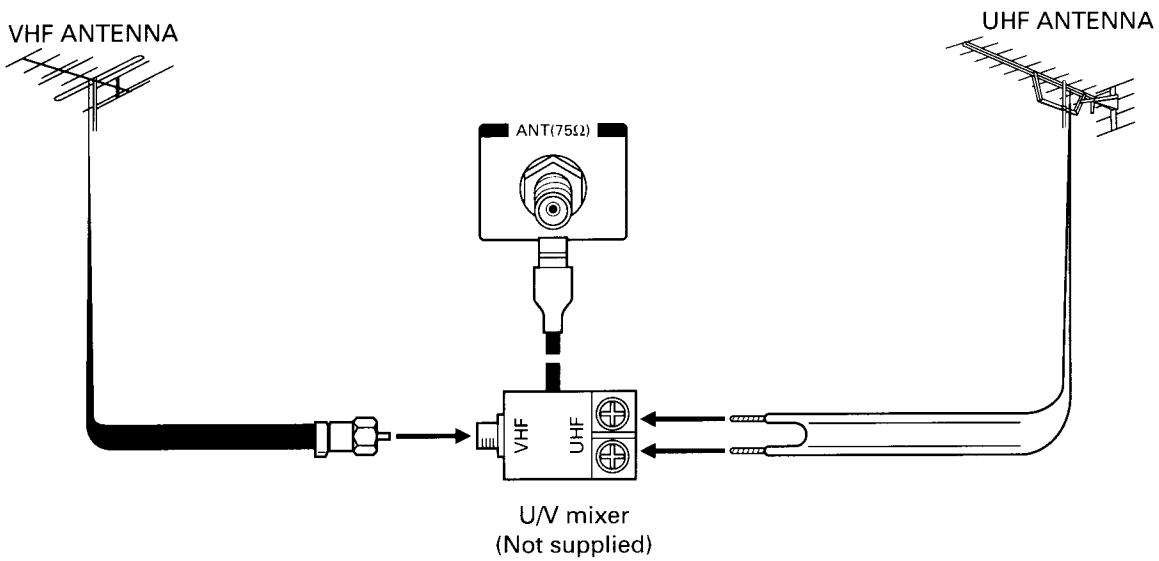


HOME ANTENNA CONNECTION

Connecting a single lead-in cable



Connecting both VHF and UHF lead-in cables



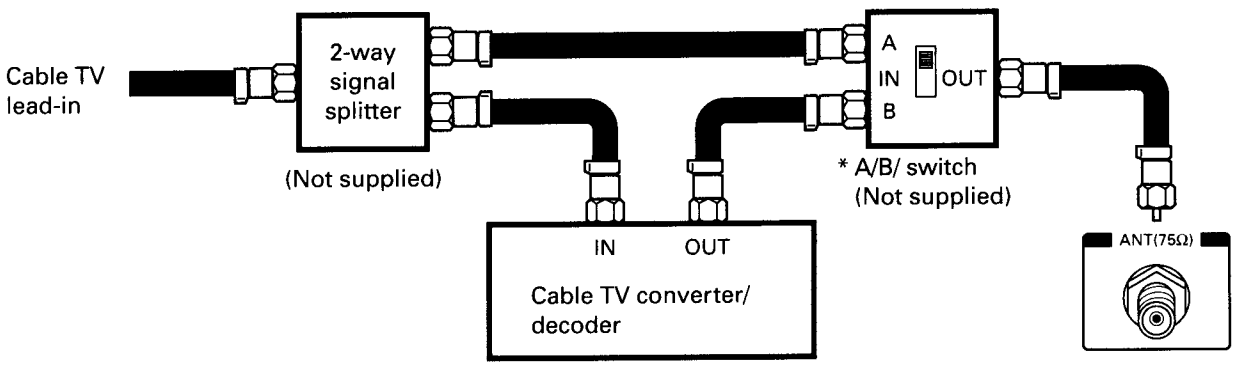
CABLE TV CONNECTIONS

Generally, the incoming cable for a Cable TV system can be connected directly to the TV antenna terminal just like a home antenna connection. Simply attach it to the ANT (75Ω) terminal. You will be able to receive unscrambled cable channels.

Cable without a decoder box (Unscrambled channels)

Some cable companies offer "premium pay channels". Since the signals of these premium pay channels are scrambled, a cable TV converter/decoder is generally provided to the subscriber by the cable TV company. This decoder box is necessary for normal viewing of the scrambled channels. For more specific instructions on installing cable TV, consult your cable TV company.

Cable with a decoder box (Unscrambled and scrambled channels)



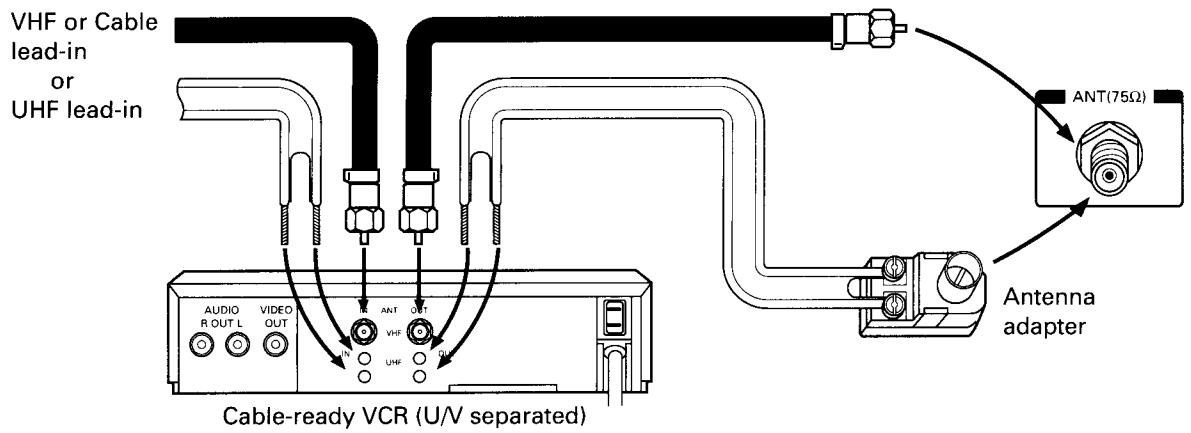
* "A" position on the A/B switch allows you to select unscrambled channels using the TV's channel keys. "B" position allows you to select scrambled channels via the converter/decoder box using the converter's channel keys. Place your TV on channel 3 or 4 to match the converter's output channel.

Notes:

- The descrambler device may or may not be a part of cable converter.
- Since cable systems vary, you may wish to consult your local cable company for additional information.

ANTENNA/CABLE TV AND VCR CONNECTIONS

Antenna/Cable connection via VCR (simplified method)

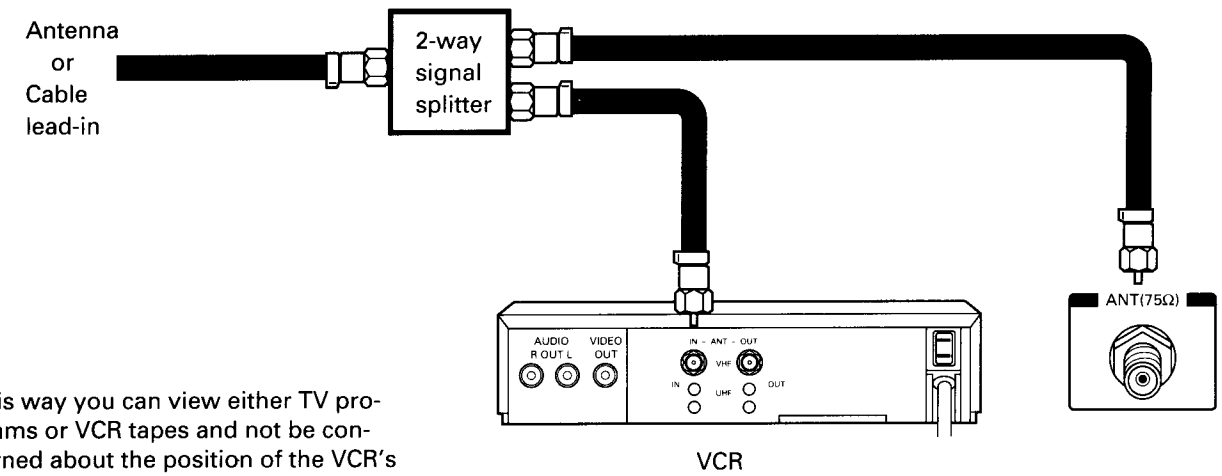


Cable-ready VCR (U/V separated)

Notes:

- On many VCR's, playing tapes causes the VCR's TV/VCR switcing to disconnect the antenna signals from the TV. If you cannot select a certain channel, try pressing the TV/VCR button on the Remote Control.
- If you connect both VHF and UHF lead-in cables, use an optional U/V mixer. See page 5.

Using a 2-way signal splitter



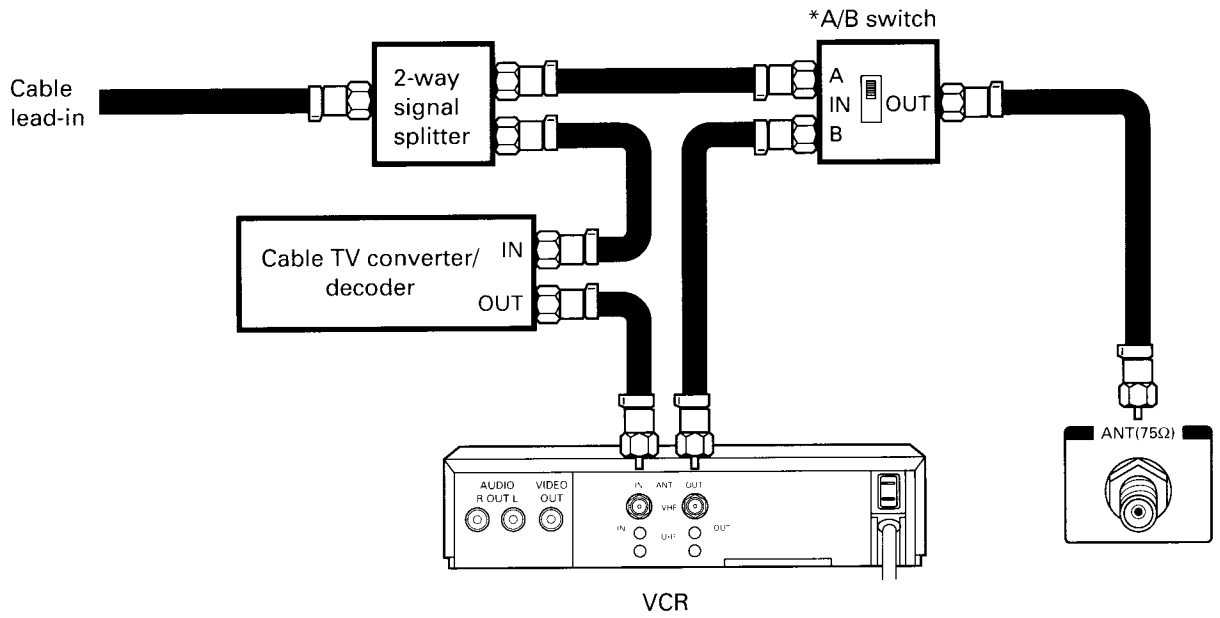
This way you can view either TV programs or VCR tapes and not be concerned about the position of the VCR's TV/VCR switch.

VCR

Note: When connected either way, the VIDEO/AUDIO connections from the VCR to the TV are required for (stereo) playback from VCR's. See page 37 for connection details.

ANTENNA/CABLE TV AND VCR CONNECTIONS (Continued)

Cable with a converter/decoder box (Scrambled channels)



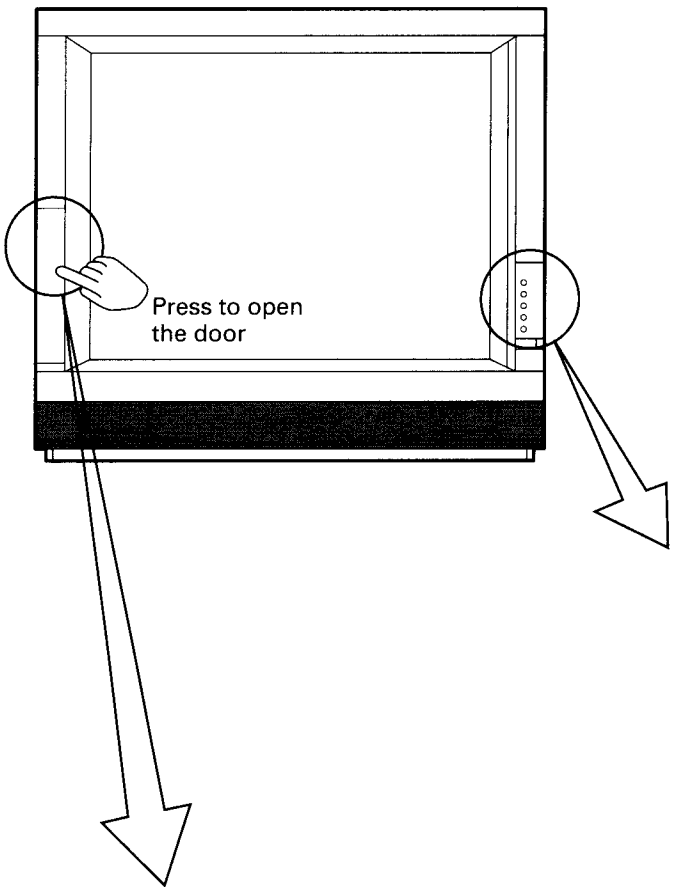
* "A" position on the A/B switch allows you to select unscrambled channels using the TV's channel keys. "B" position on the A/B switch allows you to select scrambled channels via the cable TV converter/decoder using the converter's channel keys. Place your TV and VCR on channel 3 or 4 to match the converter's output channel.

Note: When connected this way, the VIDEO/AUDIO connections from the VCR to the TV are required for stereo playback from stereo VCR's. See page 37 for connection details.

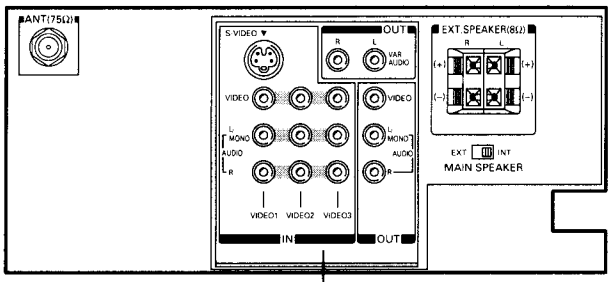
LOCATION OF CONTROLS (TV Set)

For specific use of each control, consult the corresponding page numbers in brackets.

Front view

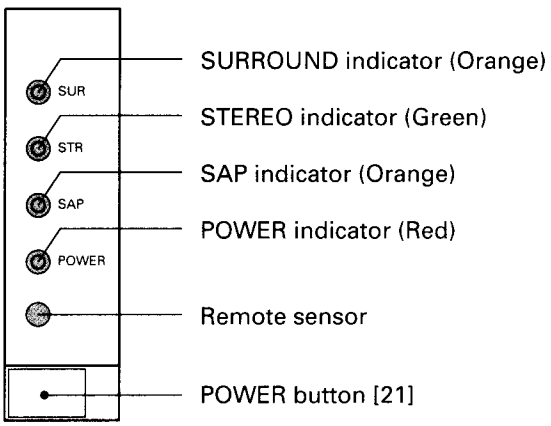


Rear panel view



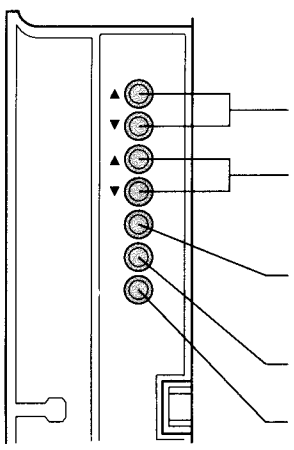
VIDEO/AUDIO terminals [37]

Indicator panel



SURROUND indicator (Orange)
STEREO indicator (Green)
SAP indicator (Orange)
POWER indicator (Red)
Remote sensor
POWER button [21]

Behind the door

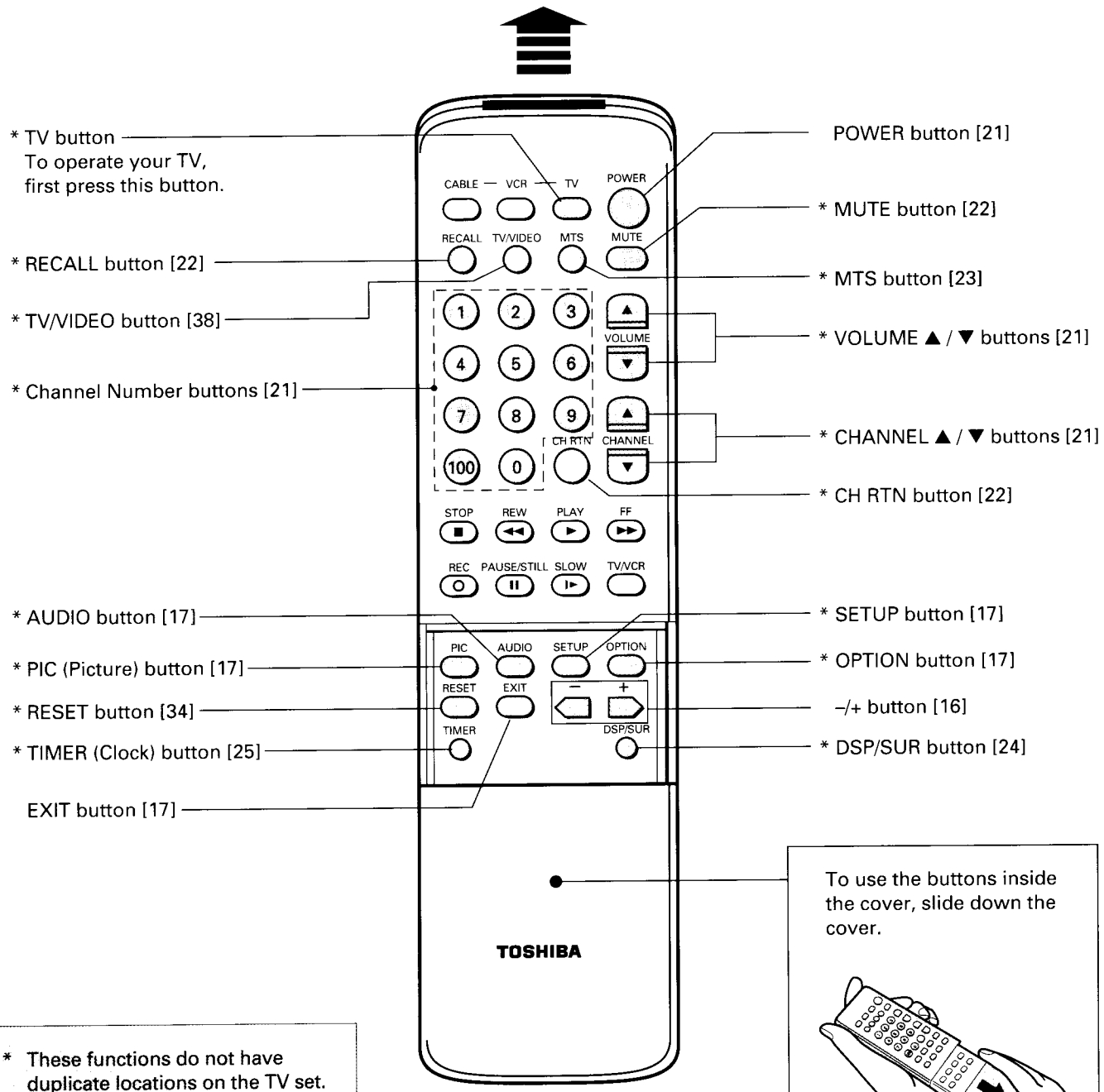


CHANNEL ▲ / ▼ buttons [21]
VOLUME ▲ / ▼ buttons [21]
+/– buttons [16]
TV/VIDEO button [38]
ADV button [16]
MENU button [16]
RESET button [34]
EXIT button [17]

LOCATION OF CONTROLS (Remote Control)

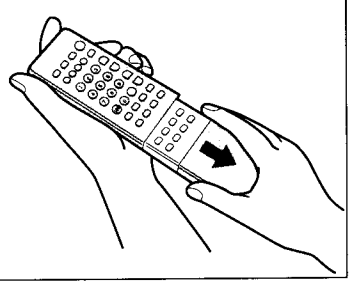
Only the buttons that are used to operate the TV set are described here. The rest of the buttons are used to operate VCR's (page 12), and Cable TV Converters (page 13).
For details on the use of each control, refer to pages in brackets.

Aim at the remote sensor on the TV set



* These functions do not have duplicate locations on the TV set. They can be controlled only with the Remote Control.

To use the buttons inside the cover, slide down the cover.



USING THE REMOTE CONTROL

INTRODUCTIONS

This Remote Control allows you to operate your TV set and most models of remote-controlled VCR's and Cable TV Converters even if they are different brands. However, this Remote Control must be programmed to control other brands of VCR's and/or Converters. If you will be using your TV set with a TOSHIBA VCR, your remote has already been preprogrammed for you.

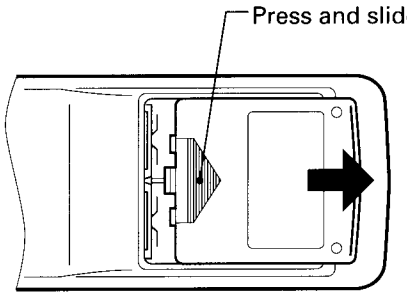
- Before attempting to operate your Remote Control, install the batteries according to the section "INSTALLING AND REPLACING BATTERIES" shown below.
- For more detailed instructions, see the section "PROGRAMMING THE REMOTE CONTROL" on page 14.

Notes:

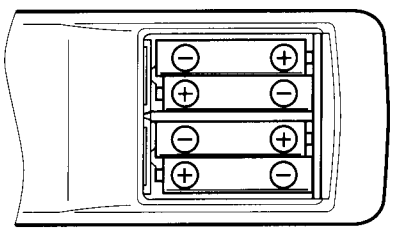
- After installing new batteries, the Remote Control will set itself to the codes for TOSHIBA's TV and VCR. If you are using the Remote Control to operate equipment that uses different codes, it will have to be reprogrammed for those codes.
- This Remote Control may have functions not available on the original remote control.
- These functions may or may not operate your VCR or Cable TV Converter. Refer to the owner's manuals supplied with the equipments to see which functions are available.
- The remote control supplied with your VCR or Cable TV Converter may have keys not duplicated on this Remote Control. If these functions are desired, the original remote will have to be used.

INSTALLING AND REPLACING BATTERIES

1 Place the Remote Control with the face down. Press down on the ridged area of the battery cover and slide it off.



2 Place the four "AAA" size batteries, matching the + and – signs on each battery to the + and – signs of the battery compartment.



3 Replace the battery cover until the lock snaps.

TIPS FOR BEST OPERATION

- For optimum performance, aim the Remote Control directly at the equipment it is being used to operate and be sure there is no obstruction between the Remote Control and the equipment.
- If your Remote Control does not always adjust the set as you wish, you probably need to replace the batteries. See the directions at the left.
- Remove dead batteries immediately to prevent battery acid from leaking into the battery compartment.
- If you do not intend to use the Remote Control for a long period, remove the batteries.

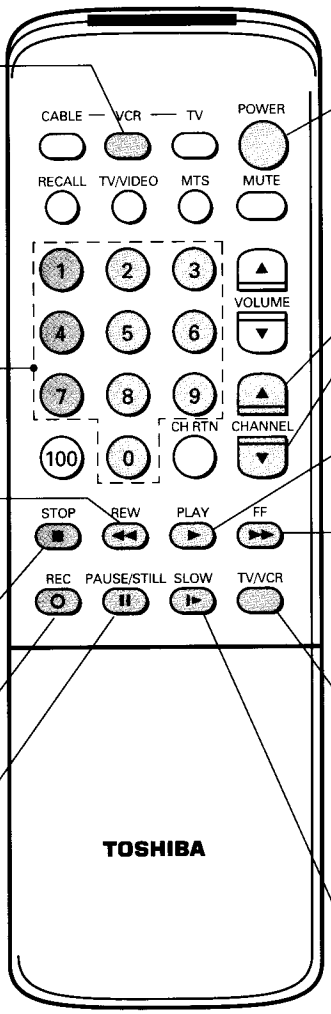
CAUTION:

- Do not throw your batteries into a fire. Dispose of your batteries in a designated disposal area.
- Do not combine used old batteries with new ones.
- Do not mix battery types.

USING THE REMOTE WITH VCR

- To control a TOSHIBA VCR, first press the VCR button to put the Remote in the "VCR mode". The buttons shown below will then control the VCR.
- If you have another brand of VCR, you can probably program your Remote to control it. Details are on page 14.

Aim at the VCR



VCR button
To operate your VCR, first press this button.

Number buttons (0 – 9)
Press the numbers desired for direct access.

REWind button
Press to rewind tapes.
In playback mode, press to view picture moving rapidly in reverse.

STOP button
Press to stop the tape.

RECord button
Press to start a recording.

PAUSE/STILL button
Press to freeze the picture during playback or recording.
Press again to release.

POWER button
Press the button to turn the VCR on.
Press again to turn off.

CHANNEL ▲ / ▼ buttons
Press ▲ button to scan up.
Press ▼ button to scan down.

PLAY button
Press to begin tape palyback.

FF button
Press to rapidly advance the tape. In palyback mode, press to view the picture moving rapidly in forward direction.

TV/VCR button
Press to the VCR mode to view the playback of a tape or to monitor a recording.
Press to the TV mode to view one program while recording another program.

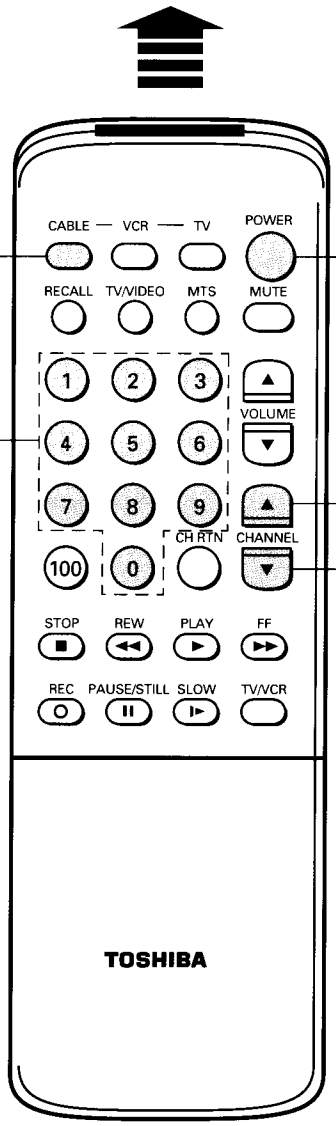
SLOW button
Press to view a slow-motion picture in the playback mode.

Note: The VOLUME ▲ / ▼ and MUTE buttons always control the TV set regardless of the CABLE, VCR or TV button position. When using these buttons, aim the Remote Control at the TV set.

USING THE REMOTE WITH CABLE TV CONVERTER

- To control a Cable TV converter, first press the CABLE button to put the Remote in the "CABLE mode".
- This Remote Control is designed to control several brands of Cable TV converter. If this Remote does not control your converter, you can probably also program your Remote to control it. Details are on page 14.

Aim at the Cable TV Converter



CABLE button
To operate your Cable converter, first press this button.

Numbered buttons (0 – 9)
Press the numbers desired for direct access.

POWER button
Press the button to turn the Cable converter on.
Press again to turn off.

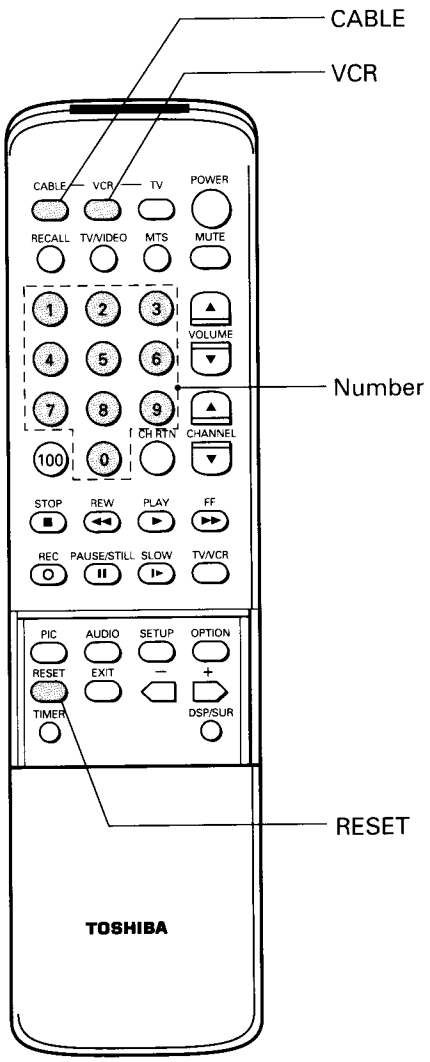
CHANNEL ▲ / ▼ buttons
Press ▲ button to select next higher channel.
Press ▼ button to select next lower channel.

Note: The VOLUME ▲ / ▼ and MUTE buttons always control the TV set regardless of the CABLE, VCR or TV button position. When using these buttons, aim the Remote Control at the TV set.
If your Cable TV converter has a volume control, adjust it for maximum volume level. Then adjust the volume using the VOLUME ▲ / ▼ buttons on this Remote.

PROGRAMMING THE REMOTE CONTROL

TO CONTROL OTHER BRANDS OF VCR'S AND CABLE TV CONVERTERS

Before using this Remote Control, it must be programmed to recognize the brands of the VCR and Cable TV Converter box it will be used to operate. If you are using a TOSHIBA VHS VCR, it has already been programmed for you. Otherwise, follow the steps below.



TO CONTROL YOUR VCR

1. Refer to the "VCR CODE TABLE" on the next page to find the code number that corresponds to the brand name of your VCR.
   Keep this number in mind.
   If more than one number is listed, you may need to try each one separately until you find the one that works.
2. Press **VCR**.
3. Press **RESET**.
4. Press two **Number** buttons (within three seconds of pressing the RESET button) to enter the code number for your brands of VCR.
5. Point the Remote at the VCR and press the POWER button to test the code number.
   — **If the right number was entered,** the VCR should turn on.
   — **If the VCR does not respond to the Remote Control,** repeat steps 1 thru 5 with another code number.

TO CONTROL YOUR CABLE TV CONVERTER

1. Refer to the "CABLE TV CONVERTER CODE TABLE" on the next page to find the code number that corresponds to the brand name of your converter.
2. Press **CABLE**.
3. Press **RESET**.
4. Press two **Number** buttons (within three seconds of pressing the RESET button) to enter the code number for your brand of converter.
5. Point the Remote at the converter and press the POWER button to test the code number.
   If the converter does not respond to the Remote Control, repeat steps 1 thru 5 with another code number.

Note: You may have to reprogram the Remote Control if you change its batteries.

For future reference, write the code you used.

VCR CODE: _____

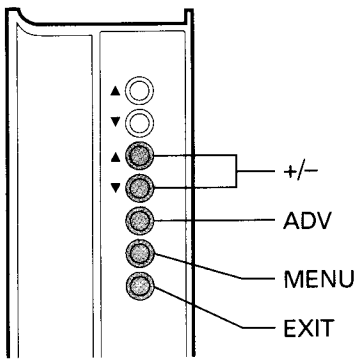
CABLE CODE: _____

VCR CODE TABLE			
BRAND NAME	CODE NUMUBER	BRAND NAME	CODE NUMUBER
AIWA	15	NEC	02, 14, 16, 30
AKAI	03, 22, 23	PANASONIC	08
AUDIO DYNAMICS	14, 16	PENTAX	05
BROCKSONIC	10	PHILCO	08, 29
CANON	08	PHILIPS	08, 29
CAPEHART	01	PIONEER	05
CITIZEN	09	QUASAR	08
CRAIG	12	RCA	00, 05, 07, 28, 35, 37
CURTIS MATHES	00, 08, 15	REALISTIC	02, 06, 08, 12, 15
DBX	14, 16	SAMSUNG	07, 32
EMERSON	10, 20, 34	SANYO	02, 12
FISHER	12, 18, 19	SCOTT	04, 13
FUNAI	15	SEARS	O2, 05, 18, 19
GE	00, 07, 08, 32	SHARP	06, 24
GOLDSTAR	09	SHINTOM	31
HITACHI	05, 35, 36	SONY	17, 26, 38
INSTANT REPLAY	08	SYLVANIA	08, 15, 29
JC PENNEY	02, 05, 08, 14, 16, 30	SYMPHONIC	15
JVC	02, 14, 16, 30	TASHIKO	09
KENWOOD	02, 14, 16, 30	TATUNG	30
MAGNAVOX	08, 29	TEAC	15, 30
MARANTZ	02, 14, 16, 29, 30	TECHNICS	08
MARTA	09	TEKNIKA	21
MEMOREX	08, 12	TOSHIBA	13
MGA	04, 27	VECTOR RESEARCH	14, 16
MINOLTA	05	VIDEO CONCEPTS	14, 16
MITSUBISHI	04, 27	WARDS	06, 25
MONTGOMERY WARD	06	YAMAHA	02, 14, 16, 30
MULTITECH	07, 15, 32	ZENITH	11, 17

CABLE TV CONVERTER CODE TABLE			
BRAND NAME	CODE NUMUBER	BRAND NAME	CODE NUMUBER
ANVISION	07, 08	PHILIPS	07, 08, 19, 26, 28, 29, 32, 33, 40, 41
CABLESTAR	07, 08		
EAGLE	08	PIONEER	18, 20
EASTERN INT	02	RANDTEK	07, 08
GENERAL INSTRUMENT	04, 05, 15, 23, 24, 25, 30, 36	RCA	27
		REGENCY	02
HAMLIN	12, 13, 34	SCIENTIFIC ATLANTA	03, 22
JERROLD	04, 05, 15, 23, 24, 25, 30, 36	SULVANIA	11
		TEKNIKA	06
MACOM	37, 43	TEXSCAN	10, 11
MAGNAVOX	07, 08, 19, 26, 28, 29, 32, 33, 40, 41	TOCOM	17, 21
		UNIKA	31
NSC	09	VIEWSTAR	07, 08, 28, 32, 41
OAK	01, 16, 38	ZENITH	14, 42

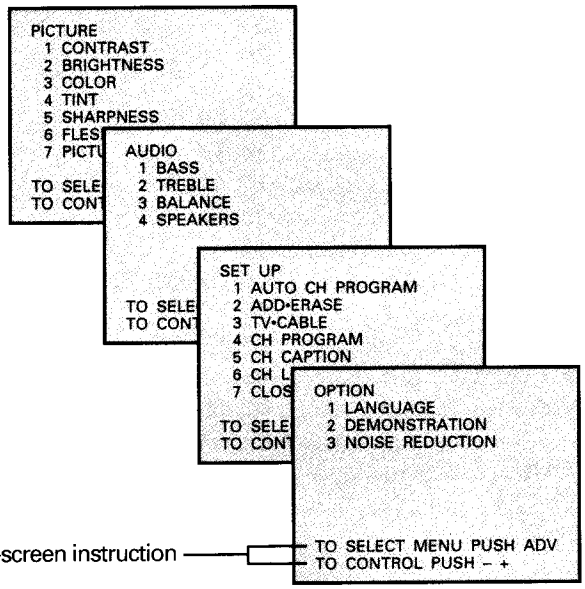
MENU FUNCTION (General Instructions)

We suggest you familiarize yourself with the procedure of using the Menu function.
To adjust any TV feature, the use of the menu function is required. The adjustments that can be made to the TV appear on the screen.



MENU BUTTON (on TV)

Each time you press **MENU**, the PICTURE, AUDIO, SET UP or OPTION menu on-sceen display is selected in order, then press **ADV**.



Note: The on-screen instructions will appear under each menu desplay for easy step-by-step procedure.

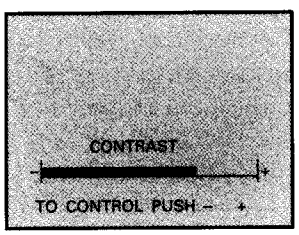
ADV BUTTON (on TV)

Use this **ADV** after you have pressed **MENU** to select the function you want to adjust.
Each time you press **ADV**, the function to be adjusted will be selected in numerical order.
The selected function will be displayed in cyan.

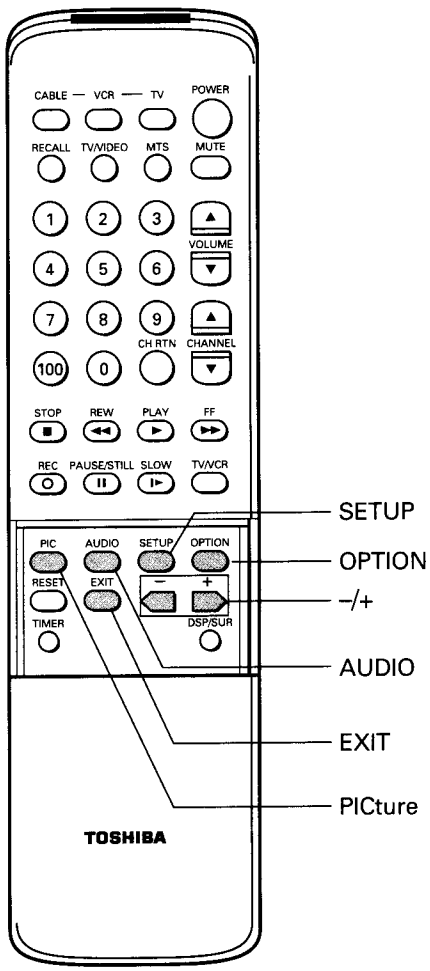
–/+ BUTTONS (on TV and on Remote)

Use these **–/+** after you have pressed **ADV** or any of the four menu buttons (PICTURE, AUDIO, SETUP or OPTION).

Example: CONTRAST adjustment mode display

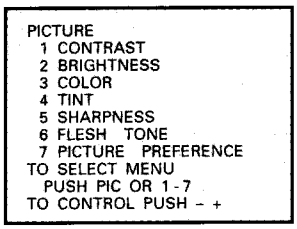


Pressing + increases the picture contrast.
Pressing – decreases the picture contrast.



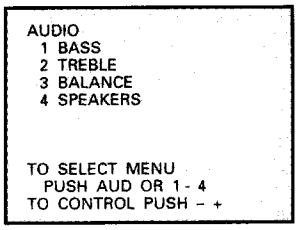
PIC (Picture) BUTTON (on Remote)

Press **PICTURE** repeatedly until the PICTURE menu function you want to adjust is selected.
Press **Number (1-7)**, if you want to directly select the function.
The selected function will be displayed in cyan, then press **–/+** to adjust the setting.
Details for each function begin on page 32.



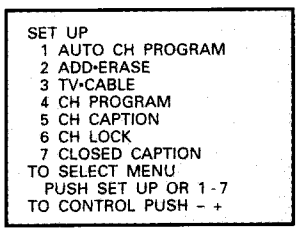
AUDIO BUTTON (on Remote)

Press **AUDIO** repeatedly until the AUDIO menu function you want to adjust is selected.
Press **Number (1-4)**, if you want to directly select the function.
The selected function will be displayed in cyan, then press **–/+** to adjust the setting.
Details for each function begin on page 34.



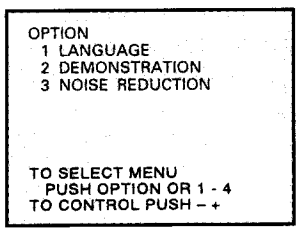
SETUP BUTTON (on Remote)

Press **SETUP** repeatedly until the SETUP menu function you want to adjust is selected.
Press **Number (1-7)**, if you want to directly select the function.
The selected function will be displayed in cyan, then press **–/+** to adjust the setting.
Details for each function begin on page 18.



OPTION BUTTON (on Remote)

Press **OPTION** repeatedly until the OPTION menu function you want to adjust is selected.
Press **Number (1-3)**, if you want to directly select the function.
The selected function will be displayed in cyan, then press **–/+** to adjust the setting.
Details for each function begin on page 35.



EXIT BUTTON (on Remote and on TV)

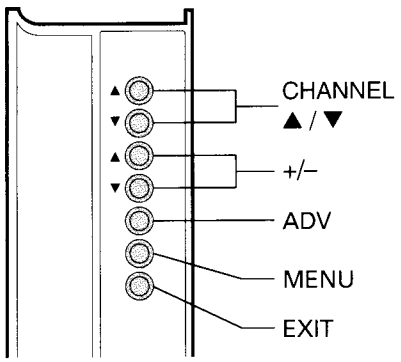
The above four menu displays will automatically disappear from the screen if no control has been operated for about 15 seconds, and all other menu displays also disappear after about 6 seconds.
If you want to clear the screen of all on-screen displays instantly, press this button.

Notes:

- The ADV button on the TV set will function as the TV/VIDEO button when no menu display is on the screen.
- The –/+ buttons on the TV set will function as the VOLUME ▲/▼ buttons when no menu display is on the screen.
- The EXIT button on the TV functions as the RESET button when there is no on-screen display.

PROGRAMMING CHANNEL MEMORY

The channel memory is the list of TV channel numbers your TV will stop on when you press the CHANNEL ▲ or ▼ button. **First, use the AUTO CHANNEL PROGRAM function to preset all active channels in your area automatically.** If necessary, arrange the preset channels with the CHANNEL PROGRAM and ADD/ERASE functions so that you can tune only desired channels.



AUTO CH PROGRAM FUNCTION

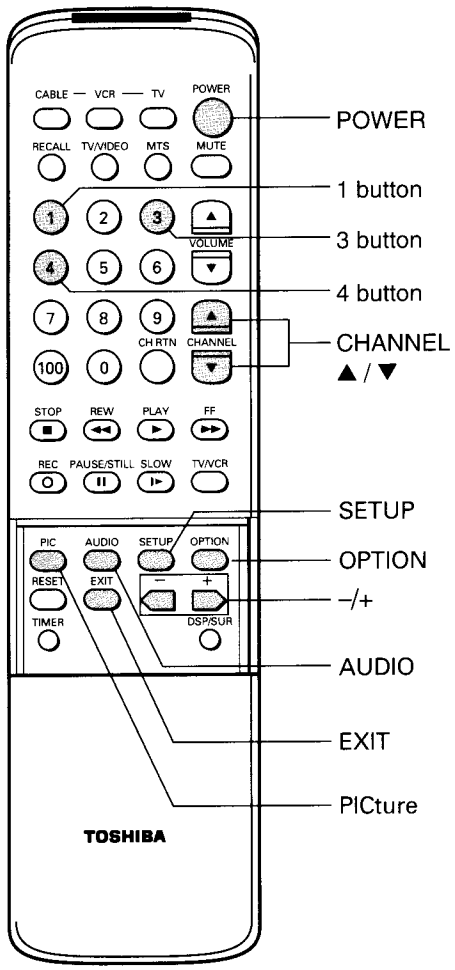
1 Press **POWER** to turn on the TV.

2 Press **SETUP** on the Remote Control (or **MENU** on the TV) to display the SET UP menu on the screen.

```
SET UP
  1 AUTO CH PROGRAM
  2 ADD•ERASE
  3 TV•CABLE
  4 CH PROGRAM
  5 CH CAPTION
  6 CH LOCK
  7 CLOSED CAPTION
TO SELECT MENU
  PUSH SET UP OR 1-7
TO CONTROL PUSH – +
```

3 Press **SETUP** repeatedly or "**1**" on the Remote Control (or **ADV** on the TV) until "1 AUTO CH PROGRAM" is displayed in cyan.

```
SET UP
  1 AUTO CH PROGRAM
  2 ADD•ERASE
  3 TV•CABLE
  4 CH PROGRAM
  5 CH CAPTION
  6 CH LOCK
  7 CLOSED CAPTION
TO SELECT MENU
  PUSH SET UP OR 1-7
TO CONTROL PUSH – +
```



4 Press the **–** or **+** to start autoprogramming. The TV will automatically determine whether the TV (antenna), CABLE STD, CABLE HRC, or CABLE IRC signals are being received. Then automatically cycle through all channels and place active channels in the channel memory.

5 When autoprogramming is complete, you will see the message at the right. You can check to see which channels are in memory by pressing **CHANNEL** ▲ or ▼.

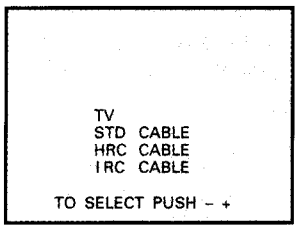
```
AUTO CH PROGRAMMING
FINISHED
                CABLE  4
```

CH PROGRAM FUNCTION

1 Select "3 TV CABLE" following the above steps 2 and 3.

```
SET UP
  1 AUTO CH PROGRAM
  2 ADD•ERASE
  3 TV•CABLE
  4 CH PROGRAM
  5 CH CAPTION
  6 CH LOCK
  7 CLOSED CAPTION
TO SELECT MENU
  PUSH SET UP OR 1-7
TO CONTROL PUSH – +
```

2 Press – or + until the mode that corresponds to your TV signal system is displayed in magenta.
Each time you press the button, the TV, STD CABLE, HRC CABLE or IRC CABLE mode will be selected in order.

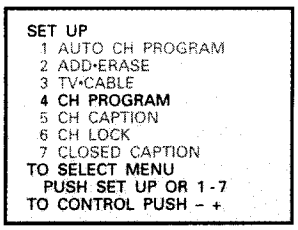


Tuning band and Receivable channels

Tuning band	Receivable channels
TV (Off the air)	VHF: 2-13 UHF: 14-69
STD CABLE*	** 1-125 (Number on this TV)
HRC CABLE*	
IRC CABLE*	

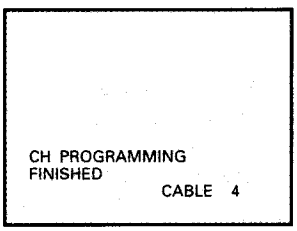
* Your cable company can advise you as to which system they are using.

3 Select "4 CH PROGRAM" mode following the steps 2 and 3 on the previous page.



4 Press – or + to start channel programming.
The TV will automatically cycle through all the TV or CABLE channels on the mode selected by the TV CABLE function and store active channels in the channel memory.

5 When channel programming is complete, you will see the message at the right.



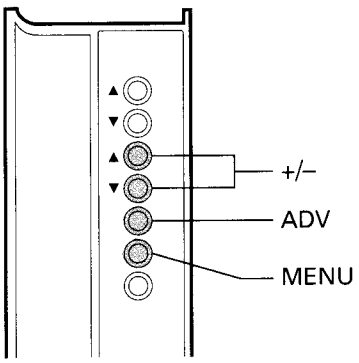
6 Press **CHANNEL** ▲ or ▼ to make sure the channel programming has been done properly.

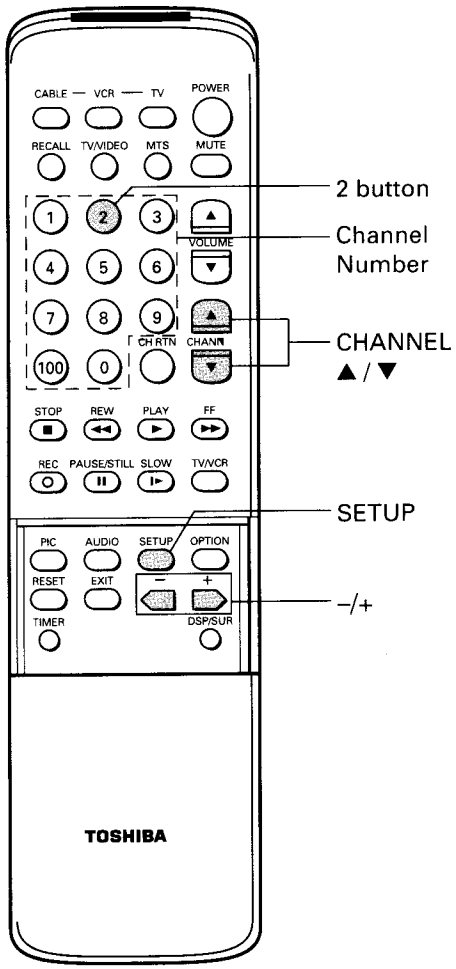
****CABLE channel reference chart**

Number on this TV	Corresponding CABLE channel	Number on this TV	Corresponding CABLE channel
1	A-8	67	67
5	A-7	68	68
6	A-6	69	69
14	A	⋮	⋮
15	B	92	92
16	C	93	93
⋮	⋮	94	94
34	U	95	A-5
35	V	96	A-4
36	W	97	A-3
37	AA	98	A-2
38	BB	99	A-1
⋮	⋮	100	100
60	XX	101	101
61	YY	102	102
62	ZZ	⋮	⋮
63	AAA	123	123
64	BBB	124	124
65	65	125	125
66	66		

The above chart is typical of many cable system channel allocations. If in doubt, consult your cable company.

PROGRAMMING CHANNEL MEMORY (Continued)

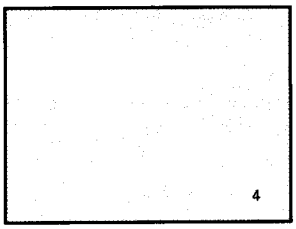




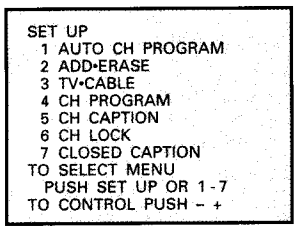
ADD ERASE FUNCTION

First follow the instructions "AUTO CH PROGRAM FUNCTION" or "CH PROGRAM FUNCTION" and then add or erase individual channels as desired.

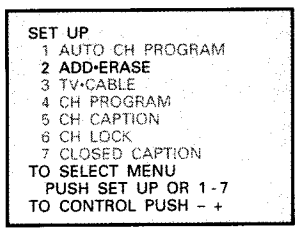
1 Select the channel you want to erase using the **CHANNEL** ▲ or ▼ button, or select the channel you want to add using the **Channel Number** buttons.



2 Press **SETUP** on the Remote Control (or **MENU** on the TV) to display the SET UP menu on the screen.



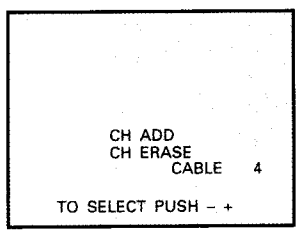
3 Press **SETUP** repeatedly or "2" on the Remote Control (or **ADV** on the TV) until "2 ADD•ERASE" is displayed in cyan.



4 Press – or + :

To erase the channel
press the button until "CH ERASE" is displayed in magenta, indicating that the channel has been erased from memory.

To add the channel
press the button until "CH ADD" is displayed in magenta indicating that the channel has been memorized.

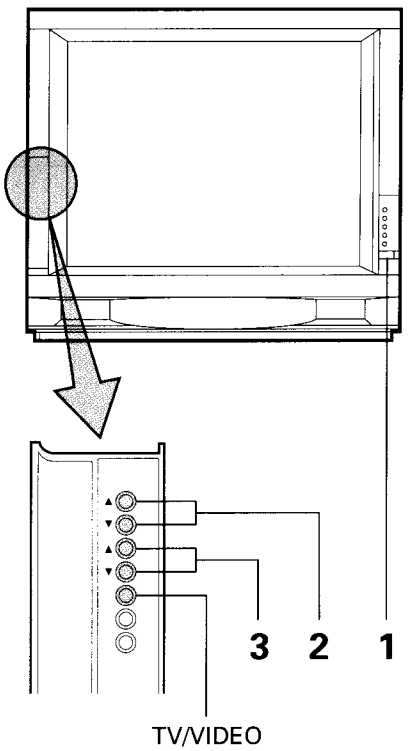


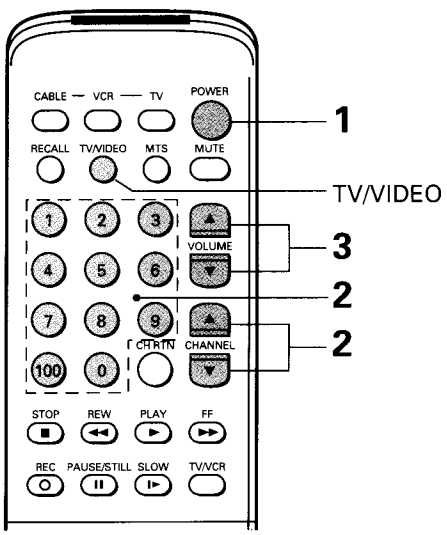
5 Repeat steps 1 through 4 for other channels.

You have now completed the channel programming.

WATCHING TV PROGRAMS

● First press the TV button on the Remote Control.

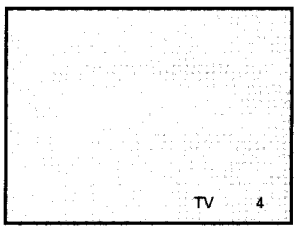




Note:
The VOLUME ▲/▼ buttons on the TV function as the menu +/– buttons while any of the menu displays (PICTURE, AUDIO, SET UP or OPTION) are on the screen.

1 Press **POWER** to turn on the TV.

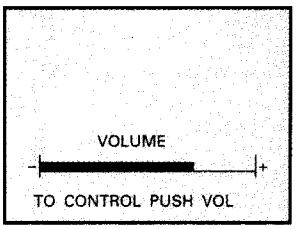
To turn off the TV, press **POWER** again.



2 Select a channel in one of the following two ways.

- **To scan the memorized channels in numerical sequence**
  Press CHANNEL ▲ to select the next higher channel.
  Press CHANNEL ▼ to select the next lower channel.
  Press the button again to select the next memorized channels.
- **To select a channel directly**
  press the **Channel Number** buttons (0-9 and 100).
  To select channel 4, press "4" (or press "0","4").
  To select channel 38, press "3","8".
  To select channel 125, press "100","2","5" in sequence.
  If you cannot select certain channels, or TV (off the air) or CABLE channels, check if the TV•CABLE function is properly set. See page 18.

3 Press VOLUME ▲/▼ to adjust the volume.
To increase the volume, press ▲.
To decrease the volume, press ▼.



Watching Video Input

The TV/VIDEO button is used to view the signals coming from other devices like VCR's or Video Disc Players connected to this TV. Details are on page 38.

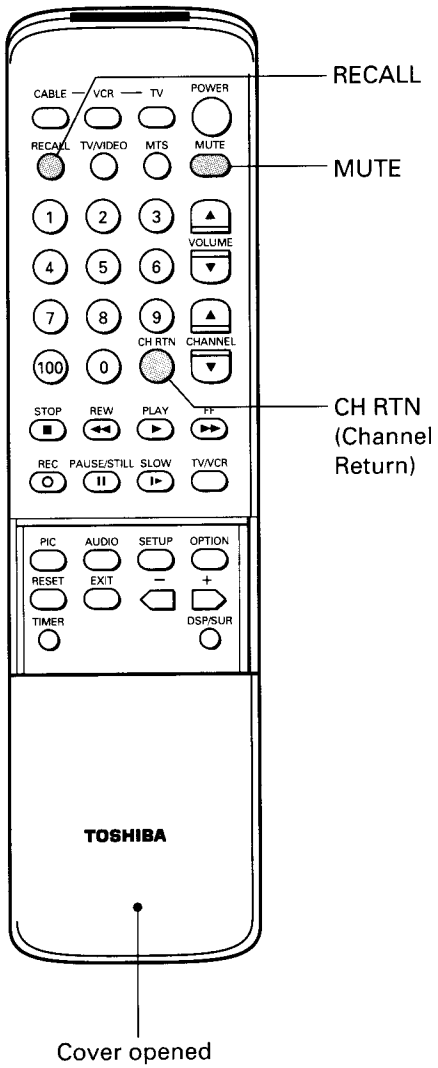
Auto-Power-Off

If a vacant channel is tuned or TV broadcast for a day is finished, the TV will automatically turn off after about 15 minutes.
This feature does not operate in the VIDEO mode.

Last Mode Memory

If the power is cut off while you are viewing the TV and the power is resupplied, the TV is turned on automatically by the ***Last Mode Memory*** feature. If the power is going to be off or when you leave home for a long time, remove the power plug from the wall outlet to prevent the TV from turning on in your absence.

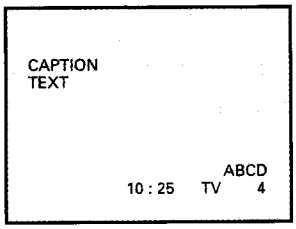
CONVENIENT REMOTE FUNCTIONS



TO DISPLAY ON-SCREEN INFORMATION

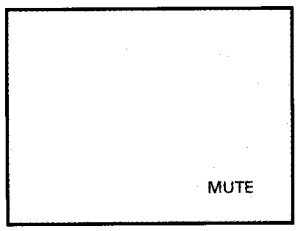
Press **RECALL** to display the following on-screen information.

- Channel number or VIDEO mode selected.
- Channel caption (if previously preset).
- Time (if clock has been set).
- Closed Caption or Text program status.



TO MUTE THE SOUND

Press **MUTE** to mute the sound immediately without affecting the picture. The word "MUTE" will be displayed on the screen as shown. This is useful during telephone calls or other interruptions.
To restore the sound, press the button again.



TO CHANGE QUICKLY BETWEEN TWO CHANNELS

Press **CH RTN** to return to the last channel that was tuned previously. This is useful should you want to view two channels. This allows you to view two programs without entering an actual channel number each time.

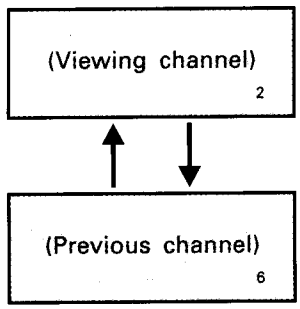
To operate this function

1 Select the first channel you want to view.

2 Select the other channel with the Channel Number buttons.

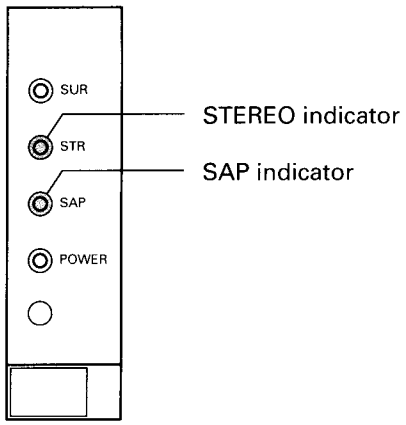
3 Press **CH RTN**.
The previous channel will return.

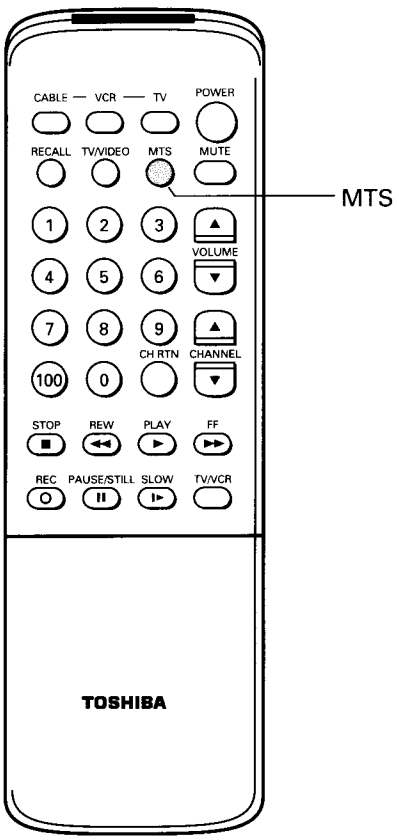
Each time you press **CH RTN**, the TV will switch back and forth between the two channels.



SELECTING STEREO/SAP BROADCASTS

The MTS (Multi-channel TV Sound) feature on this TV allows you to improve your TV viewing with high fidelity stereo sound. MTS also provides for an extra channel called Second Audio Program (SAP) used to transmit a second language for bilingual transmission or other sound.

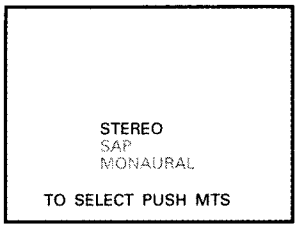




LISTENING TO STEREO SOUND

1 When the TV receives a stereo broadcast, the STEREO indicator (green) will light up.

2 Press **MTS** until "STEREO" is displayed on the screen in magenta.



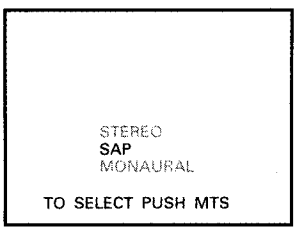
If a broadcasting signal is not strong enough and noise-free stereo sound is not available, select the MONAURAL mode by pressing the MTS button to receive monaural sound. The noise should be reduced.

Normally this function can be left in the STEREO mode. Your TV will then automatically reproduce either stereo or monaural sound, whichever is broadcast.

LISTENING TO SECOND LANGUAGE

1 When the TV receives a SAP broadcast, the SAP indicator (orange) will light up.

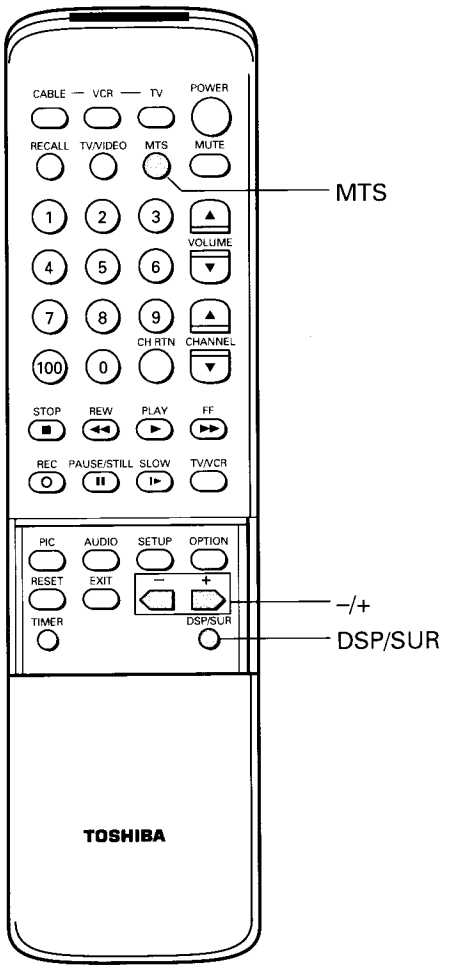
2 Press **MTS** until "SAP" is displayed in magenta.
You will hear only the second language from the left and right speakers.



Notes:

- Be sure you have selected the STEREO mode if broadcast is in stereo.
- If the STEREO (or SAP) indicator does not light up in spite of a known MTS broadcast, select the STEREO or SAP mode by pressing the MTS button again.
- The MTS button will not function in the VIDEO mode.

ENHANCING THE SURROUND SOUND EFFECT

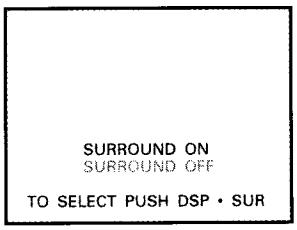


TO ACTIVATE SURROUND FUNCTION

1 Press **MTS** to select the STEREO mode.

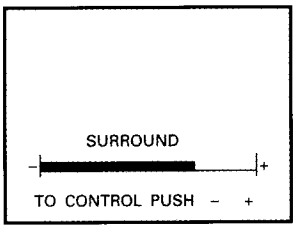
2 Press **DSP/SUR** on the Remote Control to call up the Surround ON/OFF mode on-screen display as shown.

Press the button until "SURROUND ON" is displayed in magenta.



The Surround function has now been activated.

3 **To adjust the Surround level**
Press **–** or **+** while the Surround ON/OFF mode display shown above is on the screen to call up the Surround adjustment mode display.

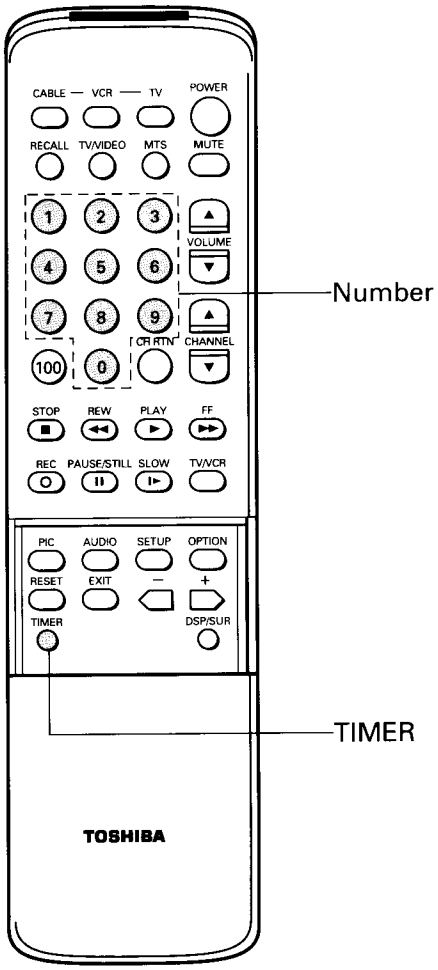


Press the + button to increase Surround level.
Press the – button to decrease Surround level.

To deactivate the Surround
Select "SURROUND OFF" in the Surround ON/OFF mode display.

Note: Normally you can leave the MTS button set to "STEREO" and the Surround function set to "ON". The TV will automatically produce either Surround stereo or monaural, whatever is broadcast.

SETTING THE OFF TIMER AND THE CLOCK



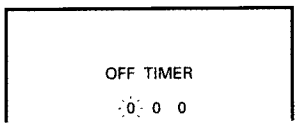
Note on the off-timer:
To display the time remaining, press **TIMER once**. The remaining time will be displayed on the screen. To erase the display, press **TIMER twice.**

Note on the clock:
If the power source for the TV is interrupted (i.e., AC cord unplugged or power failure), the clock will have to be reset. (The time display will show "00:00".)

TO SET THE OFF (SLEEP) TIMER

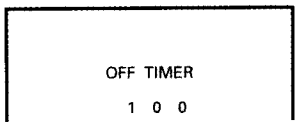
With the OFF timer, you can set the TV to turn off automatically after a pre-determined period of time (every 10 minutes, up to 180 minutes = 3 hours).

1 Press **TIMER** to select the TIMER mode.

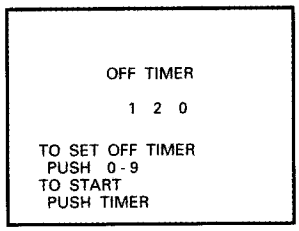


2 Press two **Number** buttons to enter the length of time you want the TV to stay on after each number position starts to blink.

Example: 120 minutes
Press 1 and 2.



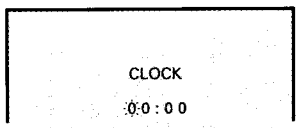
3 Press **TIMER** to start the timer.
The display color will change from magenta to cyan, and then the display will go off.



To cancel the setting
Press **POWER** twice, once to turn the TV off and once to turn it on again.

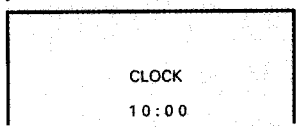
TO SET THE CLOCK

1 Press **TIMER** twice to select the CLOCK mode on the right.

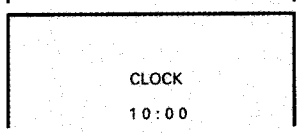


2 Press four **Number** buttons to enter the correct time, after each number position starts to blink.

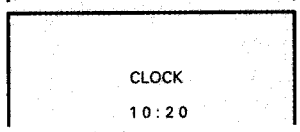
Example: To set 10:25 p.m.
Press 1, 0, 2, and 5.

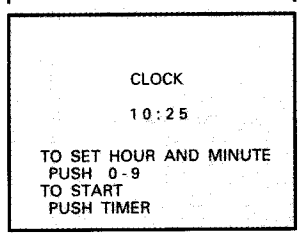


● The clock operates on a 12 hour-cycle.



3 Press TIMER to start the clock.
The display color will change from magenta to cyan, and then the display will go off.

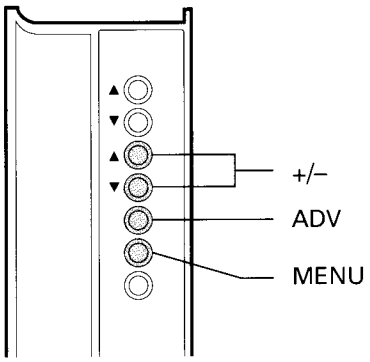




To monitor the time
Press **RECALL.**

CAPTIONING CHANNELS

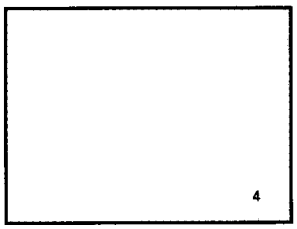
This feature allows you to enter a four letter channel identifier of your choice that will appear over the channel number display. The caption can be anything you want (for example the station call letters).



TO CAPTION CHANNELS

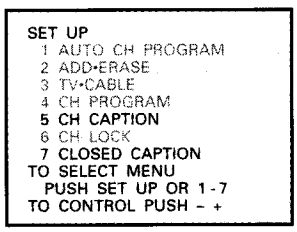
1 Select the channel you want to caption.

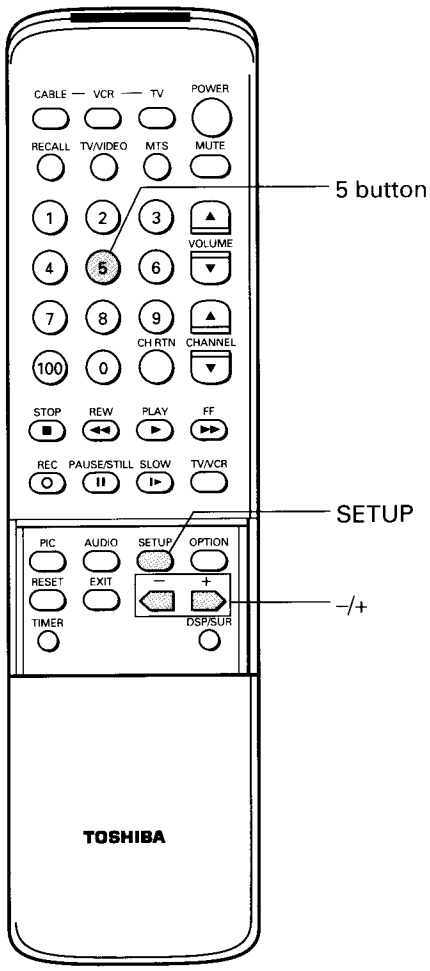
Example: To assign "ABCD" to channel 4.



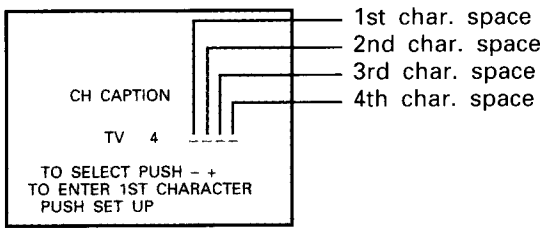
2 Press **SETUP** on the Remote Control (or **MENU** on the TV) to display the SET UP menu on the screen.

3 Press **SETUP** repeatedly, or "**5**" on the Remote Control (or **ADV** on the TV) until "5 CH CAPTION" is displayed in cyan.

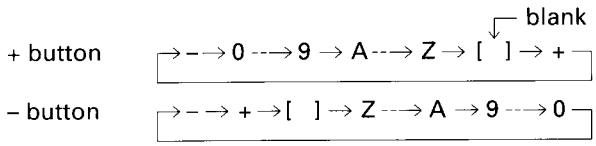




4 Press – or + to call up the caption setting mode display shown below on the screen.

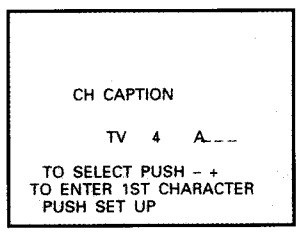


Letters of alphabet, numbers and other graphic symbols are available for captioning.
Each time you press the – or + button, the character to be displayed will change in the following order.

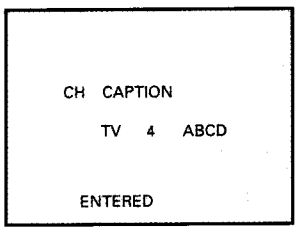


5 Press – or + to put a character "A" in the 1st character space.
Press the button until the character you want appears on the screen.

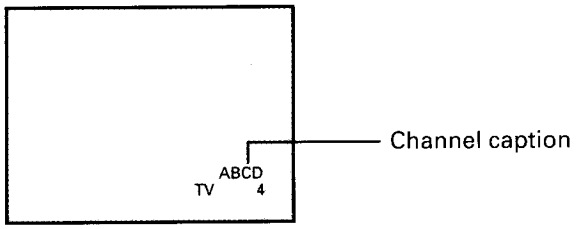
6 Press **SETUP** once to enter the 1st character and to move to the next character space.



7 Repeat steps 5 and 6 to enter the 2nd, 3rd and 4th characters "B", "C", "D". When the on-screen message at the right appears, the channel caption has been stored in the memory.



8 Repeat steps 1 through 7 for other channels.
You can caption up to 32 channels.
The caption will appear when you turn the TV on, select a channel, or press the RECALL button.



TO CLEAR YOUR CAPTIONING

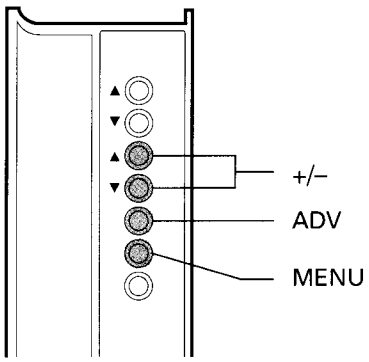
1 Select the channel which has the caption you want to erase.

2 Call up the channel caption setting mode display following steps 2 through 4 on the previous page.

3 Enter "[blank]" or "–" in all character spaces.

LOCKING CHANNELS

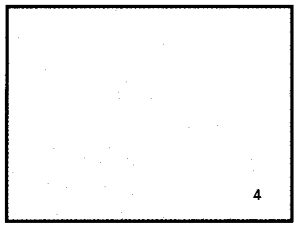
With this function you can lock out specific channels (for example a channel that you do not want your children to watch) by entering your own 4-digit code. The TV will not be able to tune them for the next 24 hours, unless you cancel the locked out channels. This TV has 4 memory spaces total for the TV mode and CABLE mode respectively.



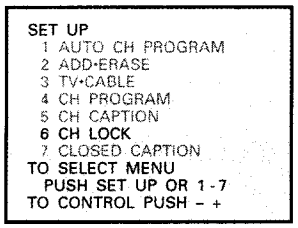
TO LOCK OUT CHANNELS

1 Select a channel you want to lock out.

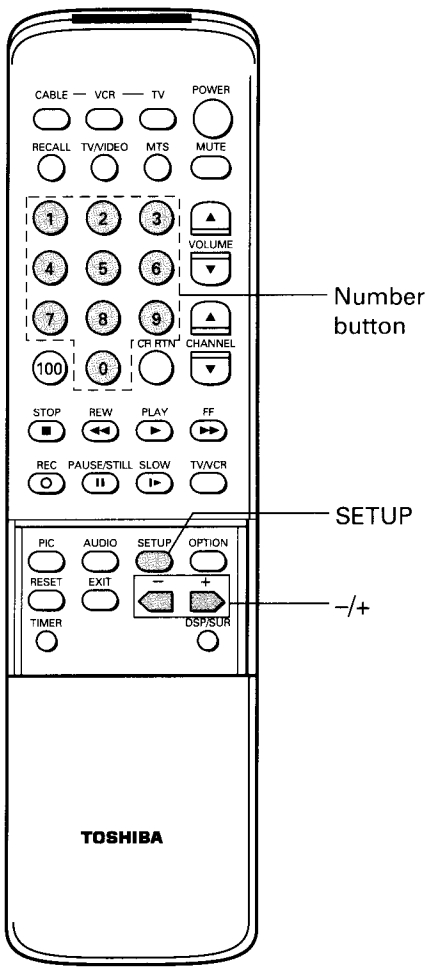
Example: channel 4



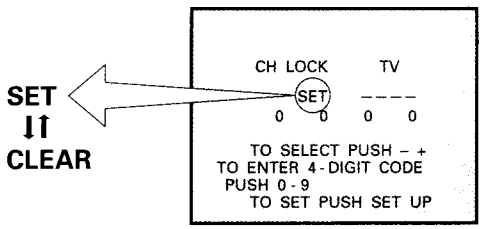
2 Press **SETUP** on the Remote Control (or **MENU** on the TV) to display the SET UP menu on the screen.



3 Press **SETUP** repeatedly or "**6**" on the Remote Control (or **ADV** on the TV) until "6 CH LOCK" is displayed in cyan.



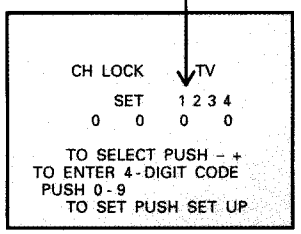
4 Press **–** or **+** to call up the channel lock adjustment mode display shown below. Each time you press the button, "SET" and "CLEAR" alternate. Select "SET".



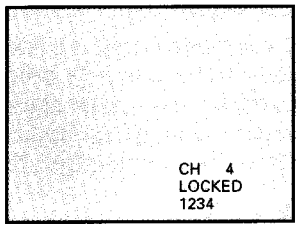
5 Press Number buttons (0 - 9) to enter a 4-digit code.
The numbers you enter will replace the dashes in the display.
Pick a number that is easy to remember.

Example: To enter "1234".
Press 1, 2, 3, and 4 in order.

1 ----→ 12 ---→ 123 --→ 1234



6 Press **SETUP** to lock out the channel.
The display at the right will appear on the screen for about 4 seconds.



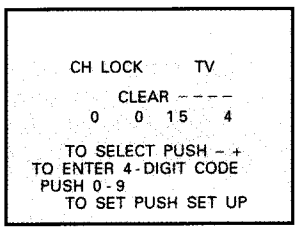
7 Repeat steps 1 through 5 for other channels.
This TV has 4 memory spaces total for the TV mode and CABLE mode respectively.

Note: If a different code number is used whenever you lock out a channel, the last one has priority over the preceding ones.

8 Select another channel, or turn off the TV set if desired.

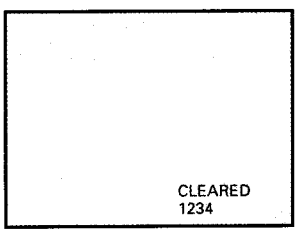
TO RESTORE CHANNELS

1 Select "CLEAR" following the steps 2 thru 4 on the previous page.

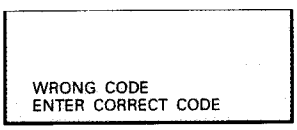


2 Press the 4-digit code used to lock out the channels with the Number buttons.

3 Press **SETUP**.
If you have entered the correct code
The display shown at the right appears.

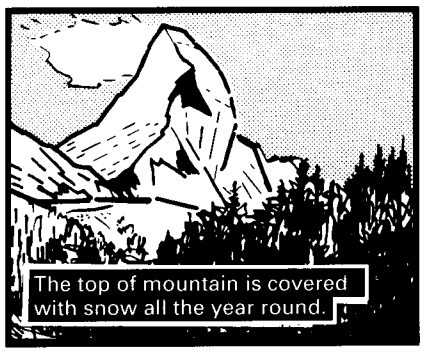


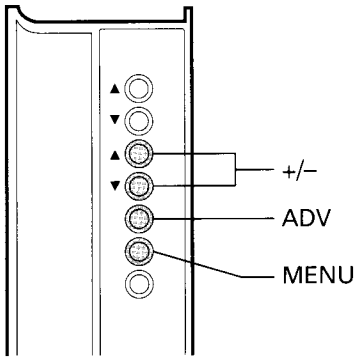
If a wrong code has been entered
These messages appear. Try to enter the correct code again.

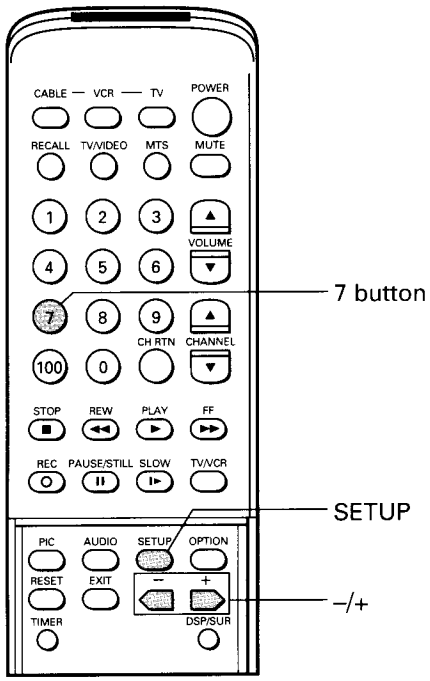


If you want to know the channels you have locked out
Call up the channel lock adjustment mode using the SETUP button and –/+ buttons.

OPERATING CLOSED CAPTIONING FEATURE





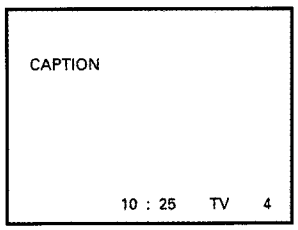


TO VIEW CAPTIONS

Closed captioning is a printed version of the dialogue, narration, and/or sound effects of a TV program.
Captions will appear at either the top or bottom of the screen during caption broadcasts as shown.
Captioning is especially helpful for hearing impaired individuals.

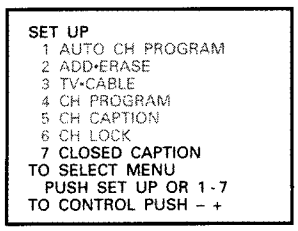
1 Select the desired program.

2 Press **RECALL** to check if the program is being closed captioned. If it is, the word "CAPTION" is displayed on the screen. The captioned programs are usually notated on your local TV listings by its service marks such as "CC".



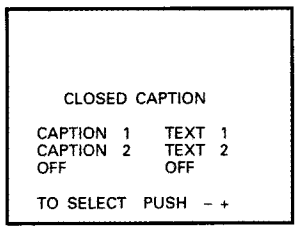
3 Press **SETUP** on the Remote Control (or **MENU** on the TV) to display the SET UP menu on the screen.

4 Press **SETUP** repeatedly or "**7**" on the Remote Control (or **ADV** on the TV) until "7 CLOSED CAPTION" is displayed in cyan.



5 Press – or + to call up the closed caption select mode display.
Usable selections are displayed in yellow.

Press – or + until "CAPTION 1" or "CAPTION2" is displayed in magenta.
The CAPTION 2 mode may be utilized for alternate languages if they are being transmitted.

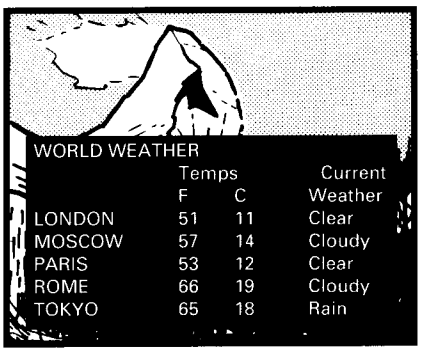


To deactivate this function
Select the "OFF" mode in the closed caption select mode display.

Note:
A closed captioned signal may not be decoded in the following situations.
- When a video tape has been dubbed.
- When the signal reception is weak.
- When the signal reception is non-standard.

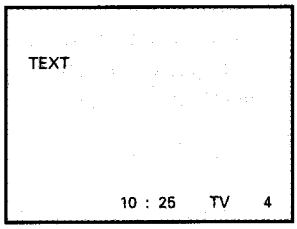
TO VIEW TEXT

Text is information that is presented using from one half to full television screen. It is usually not related to the program.
For example, it could be a listing of the closed-captioned programs, news, weather information or stock market reports.



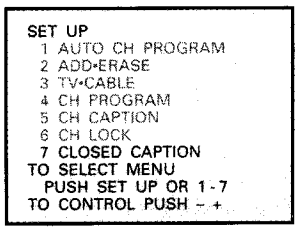
1 Select the desired program.

2 Press **RECALL** to check if the program includes TEXT information.
If it does, the word "TEXT" is displayed on the screen.



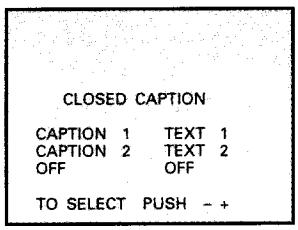
3 Press **SETUP** on the Remote Control (or **MENU** on the TV) to display the SET UP menu on the screen.

Press **SETUP** repeatedly or "**7**" on the Remote Control (or **ADV** on the TV) until "7 CLOSED CAPTION" is displayed in cyan.



4 Press – or + to call up the closed caption select mode display.
Usable selections are displayed in yellow.

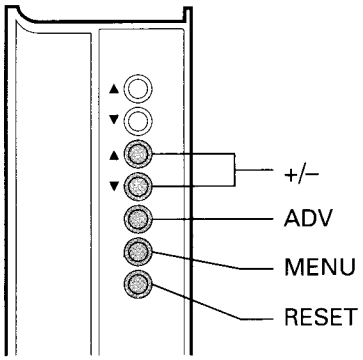
Press – or + until "TEXT 1" or "TEXT 2" is displayed in magenta.



To deactivate this function
Select the "OFF" mode in the closed caption select mode display.

Note:
If you select a Caption format channel and the "TEXT" mode, the TEXT screen will always be displayed.
However, if the TEXT character signal is not transmitted, the characters are not displayed.

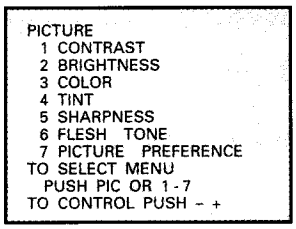
ADJUSTING THE PICTURE



TO ADJUST THE PICTURE QUALITY

You can adjust the picture quality (CONTRAST, BRIGHTNESS, COLOR, TINT, and SHARPNESS) to suit your personal preference.

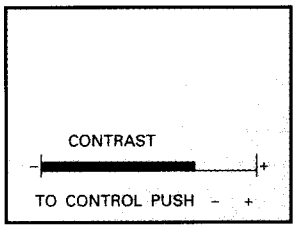
1 Press **PIC** on the Remote Control (or **MENU** on the TV) to display the PICTURE menu.



2 Press **PIC** or the Number buttons (**1-5**) on the Remote Control (or **ADV** on the TV) until the item you want to adjust is displayed in cyan.

3 Press **–** or **+** to adjust the level.

Example: CONTRAST adjustment mode display

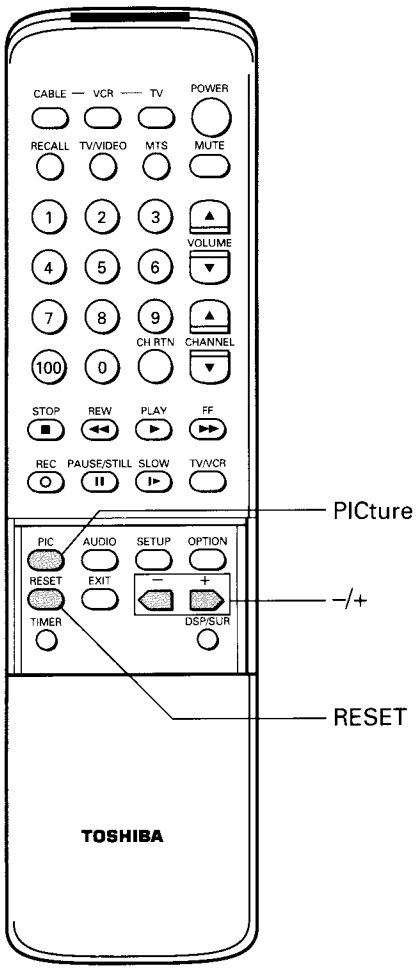


Press **PIC** or **MENU** (while the bar display remains on the screen). The new setting will appear in the PICTURE menu.

Item		Pressing	
		–	+
1	CONTRAST	lower	higher
2	BRIGHTNESS	darker	lighter
3	COLOR	paler	deeper
4	TINT	reddish	greenish
5	SHARPNESS	softer	sharper

The above five PICTURE items you have adjusted will be stored in the MEMORY of the PICTURE PREFERENCE function.(See page 33.)

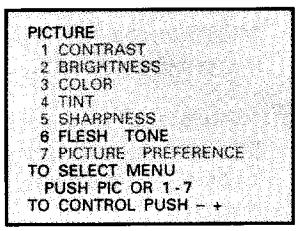
To reset the picture adjustments
Press **RESET**. (See page 34 for details.)



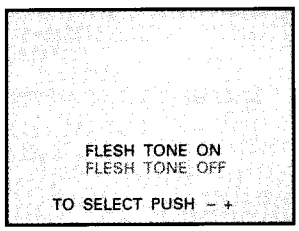
TO ACTIVATE FLESH TONE FUNCTION

This function allows you to obtain natural flesh tone by correcting the reference of tint between TV stations.

1 Select "6 FLESH TONE" following the steps 1 and 2 on the previous page.



2 Press – or + until "FLESH TONE ON" is displayed on the screen in magenta. This function has now been activated.

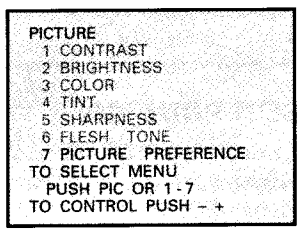


To deactivate this function
Select "FLESH TONE OFF"

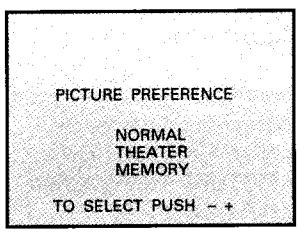
TO SELECT PICTURE PREFERENCE FUNCTION

You can select the tone of the picture you like from among three picture preset modes (NORMAL, THEATER, MEMORY) instantly.

1 Select "7 PICTURE PREFERENCE" following the steps 1 and 2 on the previous page.



2 Press – or + until your desired mode is displayed in magenta.

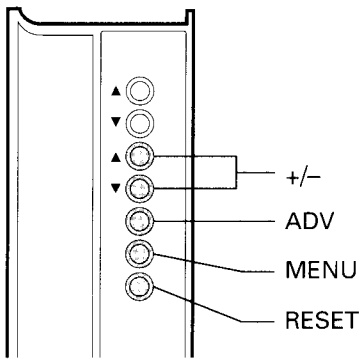


Mode	Picture quality
NORMAL	the picture quality preset at the factory
THEATER	soft and moody picture
MEMORY	the picture quality you set(First follow page 32.)

Note: Pressing the RESET button resets the picture quality of the NORMAL mode to the factory-preset level.

ADJUSTING THE SOUND

You can adjust the AUDIO functions (BASS, TREBLE and BALANCE) to suit your personal preference.



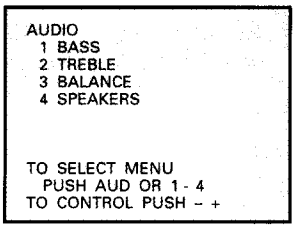
TO ADJUST THE SOUND QUALITY

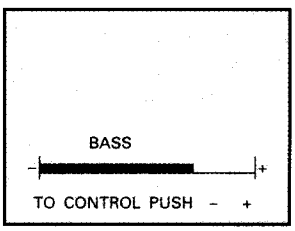
1 Press **AUDIO** on the Remote Control (or **MENU** on the TV) to display the AUDIO menu on the screen.

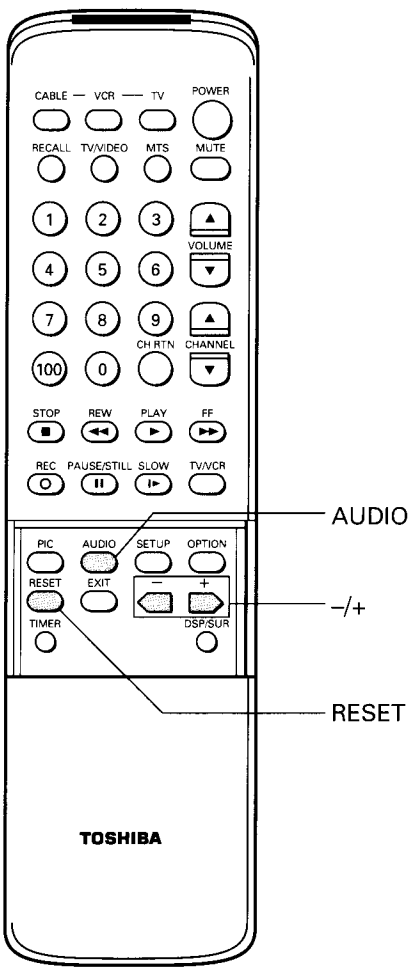
2 Press **AUDIO** or the Numbered buttons (1-3) on the Remote Control (or **ADV** on the TV) until the item you want to adjust is displayed in cyan.

3 Press – or + to adjust the level.

Example: BASS adjustment mode display





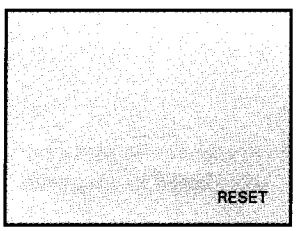


Press **AUDIO** or **MENU** (while the bar display remains on the screen). The new setting will appear in the AUDIO menu.

Item		Pressing	
		–	+
1	BASS	weaker	stronger
2	TREBLE	weaker	stronger
3	BALANCE	decreases the right channel	decreases the left channel

RESET BUTTON

To reset the PICTURE and AUDIO adjustments to the factory-preset level
Press **RESET**.
You will see the display at the right (maximum CONTRAST and all other adjustments centered).



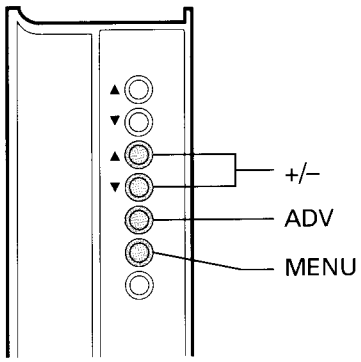
The RESET button also performs the following adjustments.

- NOISE REDUCTION.....OFF
- PICTURE PREFERENCE.....NORMAL
- PIP CONTRAST.....Maximum setting

Note:
The "SPEAKERS" function is explained on page 41.

CHANGING ON-SCREEN DISPLAY LANGUAGE

Three different languages (ENGLISH, FRENCH and SPANISH) are available for the on-screen displays (adjustment menus, and messages), and you can choose the desired one.



TO SELECT A LANGUAGE

1 Press **OPTION** on the Remote Control (or **MENU** on the TV) to display the OPTiON menu on the screen.

```
OPTION
  1 LANGUAGE
  2 DEMONSTRATION
  3 NOISE REDUCTION

TO SELECT MENU
  PUSH OPTION OR 1 - 4
TO CONTROL PUSH - +
```

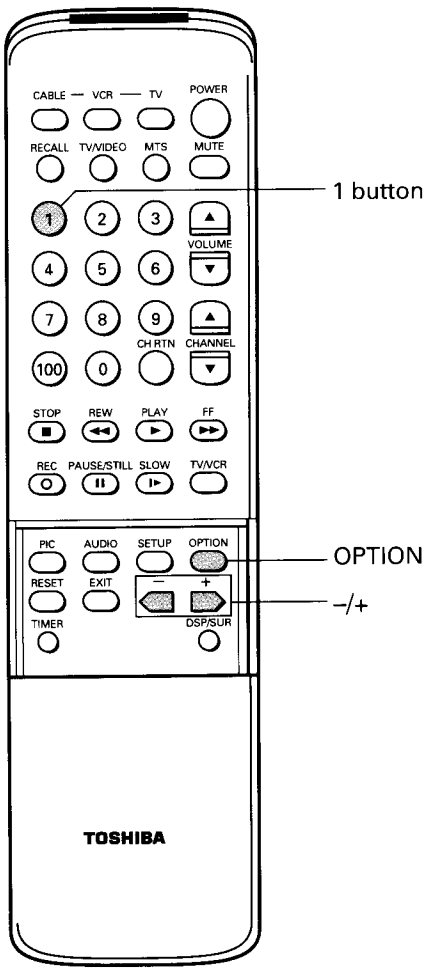
2 Press **OPTION** repeatedly or "**1**" on the Remote Control (or **ADV** on the TV) until "1 LANGUAGE" is displayed in cyan.

3 Press – or + until your desired language is displayed in magenta.

```
LANGUAGE

ENGLISH
FRENCH
SPANISH

TO SELECT PUSH - +
```



Example: PICTURE menu display

"ENGLISH"

```
PICTURE
  1 CONTRAST
  2 BRIGHTNESS
  3 COLOR
  4 TINT
  5 SHARPNESS
  6 FLESH  TONE
  7 PICTURE  PREFERENCE
TO SELECT MENU
  PUSH PIC OR 1 - 7
TO CONTROL PUSH - +
```

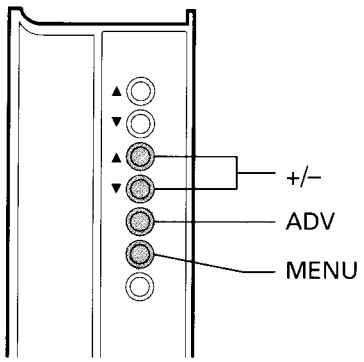
"FRENCH"

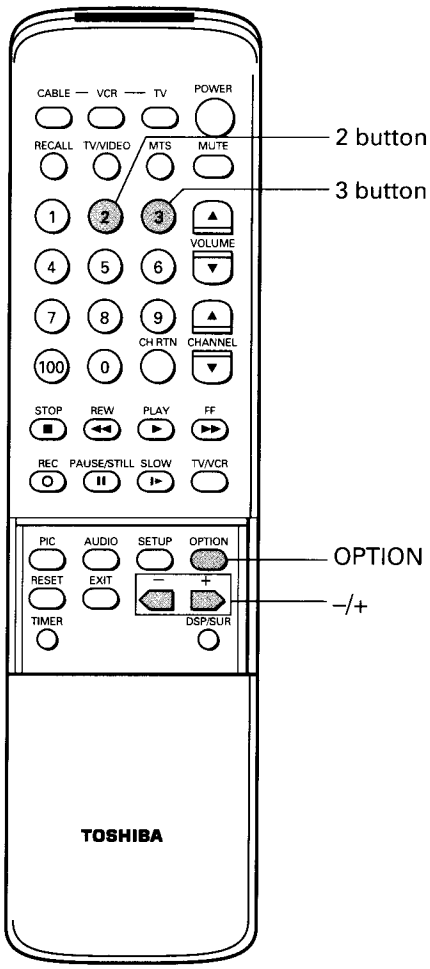
```
IMAGE
  1 CONTRASTE
  2 LUMINOSITE
  3 COULEUR
  4 TEINTE
  5 NETTETE
  6 COULEUR DE LA PEAU
  7 PREFERANCE D IMAGE
APPUYEZ PIP OU 1 - 7
  POUR SELECT MENU
APPUYEZ - + POUR REGLAGE
```

"SPANISH"

```
IMAGEN
  1 CONTRASTE
  2 BRILLO
  3 COLOR
  4 TINTE
  5 NITIDEZ
  6 TONO POR PIEL
  7 PREFERENCIA DE IMAGEN
APRETAR PIC O 1 - 7
  PARA ESCOJER MENU
APRETAR - + POR CONTROL
```

ACTIVATING ON-SCREEN DEMONSTRATION AND NOISE REDUCTION FUNCTIONS

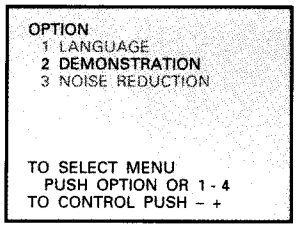




TO START THE AUTO DEMONSTRATION

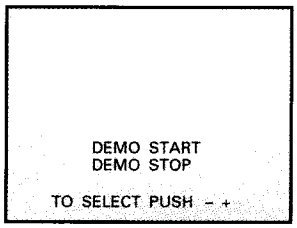
When this function is activated, your TV will automaticaliy display a variety of its on-screen menus and special features. This function is provided for the TOSHIBA dealer.
You may not need to use this function.

1 Press **OPTION** on the Remote Control (or **MENU** on the TV) to display the OPTION menu on the screen.



2 Press **OPTION** repeatedly or "**2**" on the Remote Control (or **ADV** on the TV) until "2 DEMONSTRATION" is displayed in cyan.

3 Press **–** or **+** until "DEMO START" is displayed on the screen in magenta. The on-screen demonstration will start after about 6 seconds.

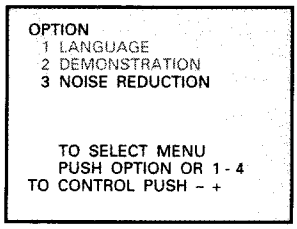


Note:
The on-screen demonstration will continue, even if the TV is turned off and on, or any other buttons are pressed.
To stop the demonstration, select "DEMO STOP".

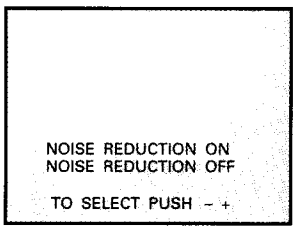
TO REDUCE PICTURE NOISE

This function allows you to reduce visible interference in your TV picture. This is useful when receiving a broadcast with a weak signal or playing back a video cassette or disc damaged by repeated use.

1 Select "3 NOISE REDUCTION" following the above steps 1 and 2.



2 Press **–** or **+** until "NOISE REDUCTION ON" is displayed on the screen in magenta.

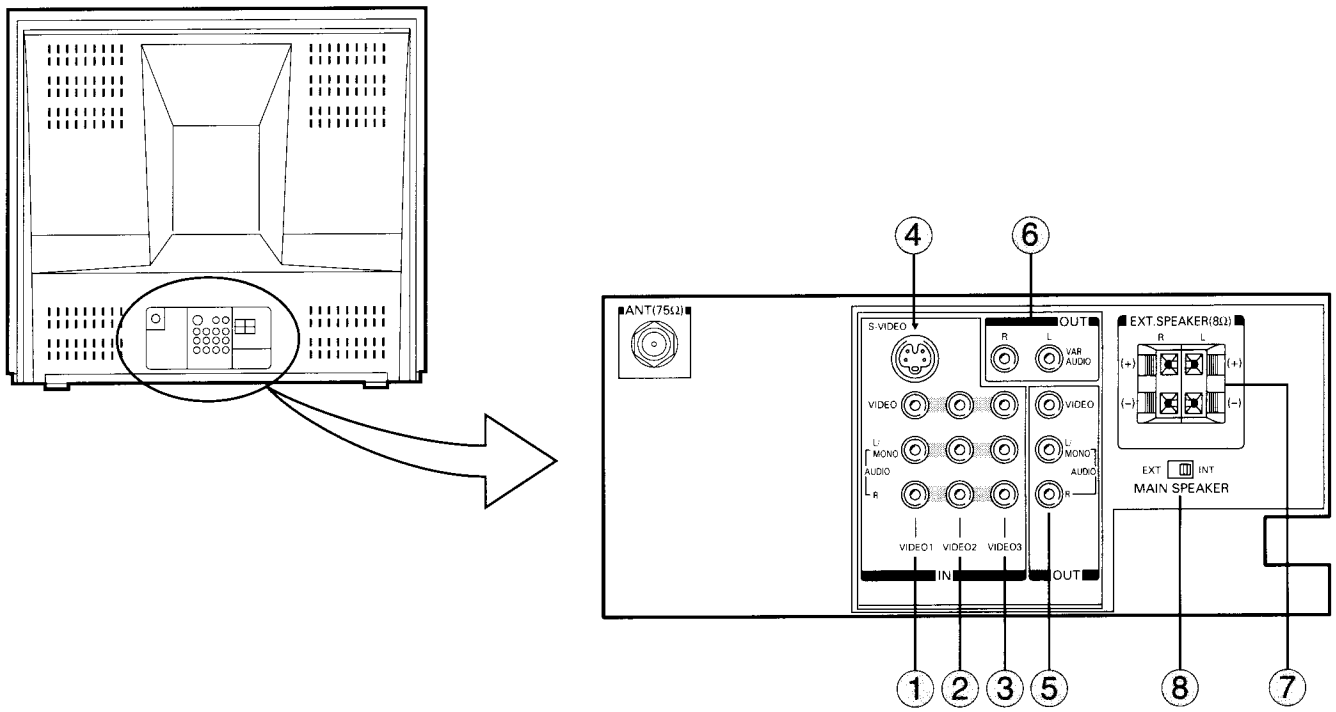


To deactivate this function
Select "NOISE REDUCTION OFF".

MONITOR PANEL

This TV set is equipped with S-VIDEO INPUT connector, VIDEO/AUDIO INPUT jacks, VIDEO/AUDIO OUTPUT jacks, and EXTERNAL SPEAKER terminals for connecting your desired video/audio equipment.

Front view



①② **VIDEO 1/VIDEO 2/VIDEO 3 Jacks** — provide for direct connection of video devices (VCR,Video Disc Player,etc.)
③ with video/audio outputs. Connection details are on page 38.

④ **S-Video Connector** — provides for direct S-video connection from S-VHS VCR. The TV's VIDEO 1 audio jacks can also be used to connect the VCR's audio cables. Connection details are on page 39.

⑤ **VIDEO/AUDIO OUTPUT Jacks** — provide fixed-level audio and video output from whatever is displayed on the screen. Connection details are on page 40.

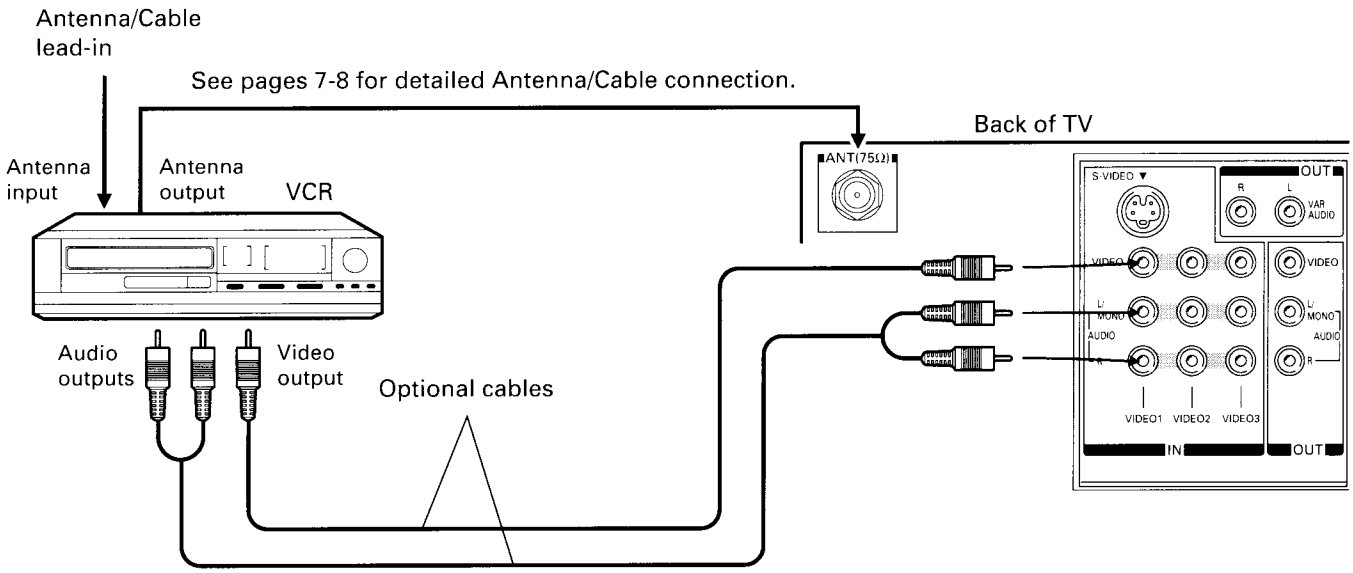
⑥ **VARIABLE AUDIO OUTPUT Jacks** — feed volume-controlled stereo audio out from whatever is displayed on the screen, allow connection of audio amplifier and let you adjust sound level with TV's remote. Connection details are on page 41.

⑦ **EXTERNAL SPEAKER Terminals** — provide for direct connection of external speakers. Connection details are on page 42.

⑧ **SPEAKER SELECT Switch** — lets you turn off TV's built-in speakers so that sound will instead come through speakers connected to EXTERNAL SPEAKER terminals. See page 42 for details.

CONNECTING STANDARD VCR

Connect VIDEO1, VIDEO2, or VIDEO3 jacks to the vIdeo/audio output jacks of an installed VCR, Video Disc Player, Camcorder, etc. for playback of video material. The material being played back on the video equipment can be viewed on the TV screen.

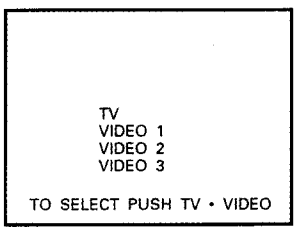


TO SELECT VIDEO INPUT SOURCE

To operate your TV and video equipment properly, refer to the instruction furnished with the video equipment.

1 Turn the TV set and VCR ON.

2 press the TV/VIDEO button on the Remote Control or on the TV set to select the appropriate source:
Each time you press the button, TV, VIDEO 1, VIDEO 2, or VIDEO 3 source will be selected in order.
The selected source will be displayed in magenta.



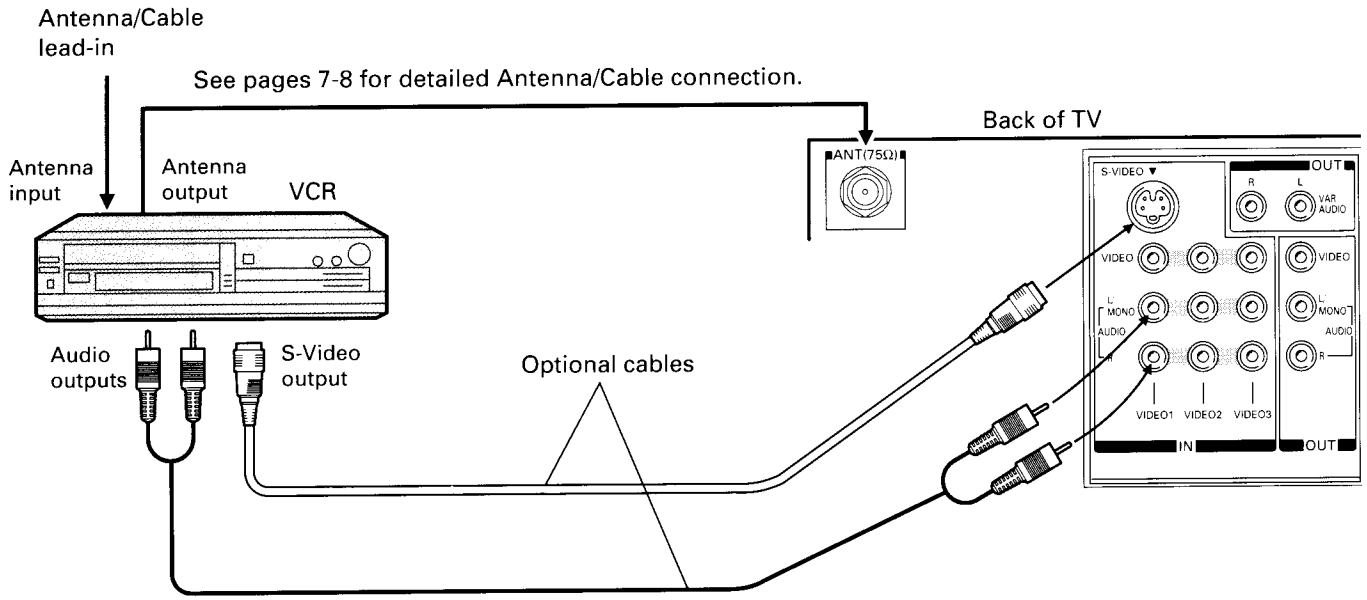
3 Operate your VCR (or VDP) normally.

Notes:

- The VIDEO 2 and VIDEO 3 inputs can also be used for connecting 2nd and 3rd video equipments with video/audio outputs. To view the video sources from these jacks, select the corresponding mode by pressing the TV/VIDEO button.
- If you connect a monaural VCR, connect the audio output of the VCR to the L/MONO jack of VIDEO 1/2/3 on the TV set.

CONNECTING VCR WITH S-VIDEO CONNECTOR

If you connect VCR with an S-VIDEO connector to the "S-VIDEO" connector on the back of the TV, you must also connect the audio cables to the AUDIO jacks of "VIDEO 1" inputs on the back of the TV. The S-video cable only carries the video signal. Audio signals are separate.



TO SELECT VIDEO INPUT SOURCE

1 Turn the TV set and VCR ON.

2 Press the TV/VIDEO button on the Remote Control or on the TV to set select the VIDEO 1 mode.

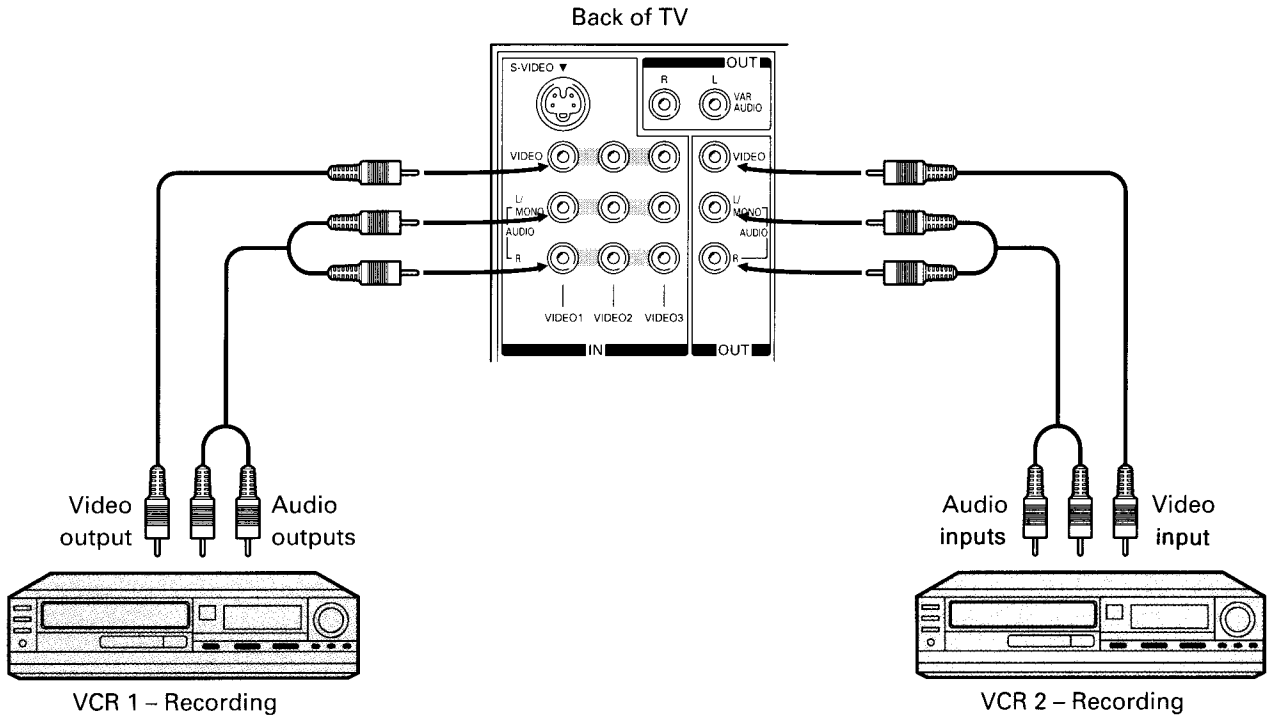
3 Operate your VCR normally.

Notes:

- If you connect a monaural VCR, connect the audio output of the VCR to the L/MONO jack of VIDEO 1 on the TV set.
- Do not connect video equipment to both the "S-VIDEO" and "VIDEO" of VIDEO 1 terminals at the same time.
- The S-VIDEO terminal accepts SEPARATED Luminance/Chrominance (Y-C) signals conforming to the NTSC standard.

DUBBING/EDITING PROGRAMS WITH 2VCRs

To dub or edit your own video tapes between one VCR and another, connect the VCR that will play to the IN jacks on your TV set. Then connect the OUT jacks from your TV set to the input jacks on the recording VCR.
Note: Do not connect the same VCR to output and input.



TO MONITOR YOUR DUBBING/EDITING

1 Turn the TV set and both VCR's ON.

2 Press the TV/VIDEO button on the Remote Control or on the TV set to select the VIDEO 1 mode.

3 Set the VCR 2 to record mode and the VCR 1 to play.

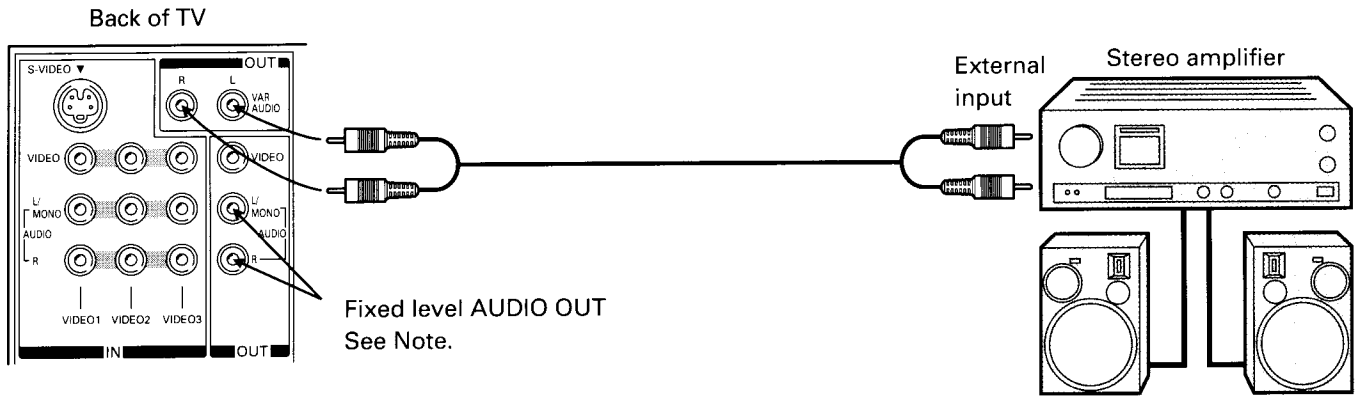
4 You can view the video material from the VCR 1 on your TV screen as you dub it to the VCR 2.

CAUTION:
The unauthorized recording of television programs, video tapes and other materials may infringe upon the provisions of the copyright laws.

Notes:
- The input switch of VCR is normally in the TV position. Change the switch of recording VCR to the LINE or CAMERA position when using the video/audio inputs of the VCR as above. Some VCR's automatically switch when the cables are plugged into the video/audio inputs.
- The VIDEO 2 and VIDEO 3 inputs can also be used for connection the playback VCR.
- If your VCR is not cable-ready, you can record cable TV programs from the VIDEO/AUDIO OUTPUT jacks.

CONNECTING AUDIO AMPLIFIER

Connect the VARiable AUDIO OUT jacks to the external input jacks on the stereo amplifier. You will be able to change and mute volume with the TV's remote control. You will also be able to control bass, treble and balance functions.



PREPARING TO USE

1 Turn the TV set and stereo amplifier ON.

2 Adjust the VOLUME control on the TV for a moderate listening level.

3 Disconnect the built-in speakers following the instructions at the right.

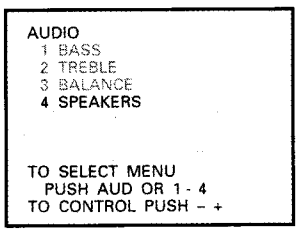
4 Adjust the volume control on the stereo amplifier for a moderate listening level.

5 Control of the audio can now be done using the audio function buttons (VOLUME, MUTE, BASS, TREBLE and BALANCE) on the TV's remote control.

Note:
The "fixed level" audio signal present at the AUDIO jacks of VIDEO/AUDIO OUT jacks is also ideal for connecting an audio cassette recorder (or amplifier) to record audio from the TV. This constant audio signal is not affected by pressing VOLUME buttons on the TV or the TV's remote control.

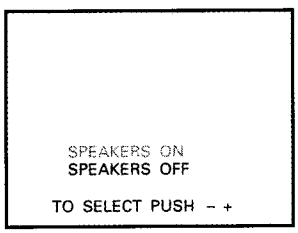
TO DISCONNECT THE BUILT-IN SPEAKERS

1 Press **AUDIO** on the Remote Control until "4 SPEAKERS" in the AUDIO menu is displayed in cyan.



2 Press – or + until "SPEAKERS OFF" is displayed on the screen in magenta.

The built-in speakers will be disconnected.

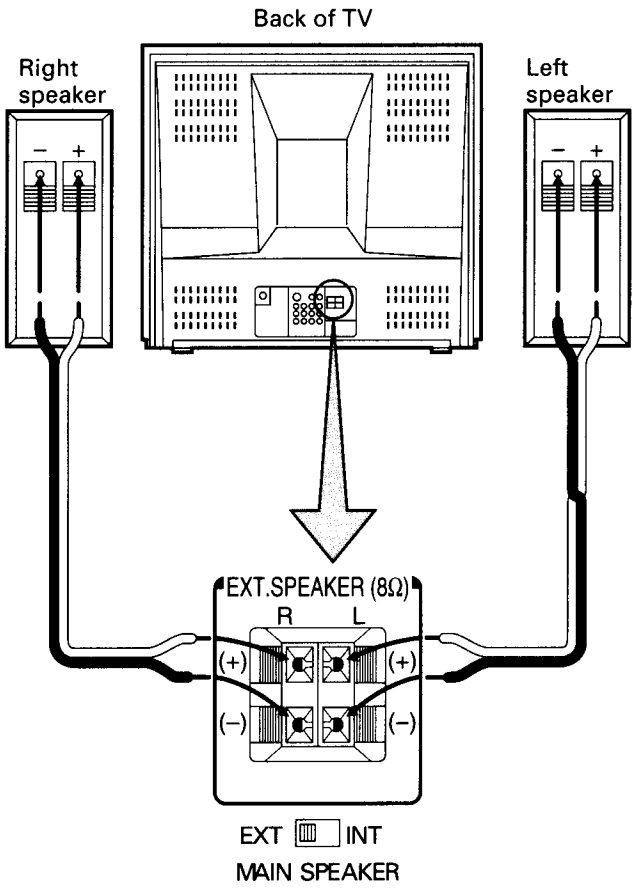


To use the built-in speakers again
Select "SPEAKERS ON" in step 2 above.

CONNECTING EXTERNAL SPEAKERS

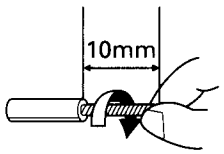
You can connect speakers to the EXTERNAL SPEAKER terminals on the TV set to enhance sound from the TV.

Before connecting the speakers, turn the TV off.

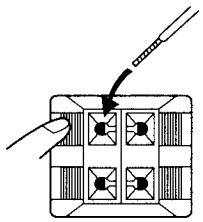


PREPARING FOR USE

1 Connect the speaker leads.
While depressing the button, insert the wire. Then, release the button.
Match the right and left channels and +/– polarities of the TV speaker terminals and external speakers.



Twist wire core.

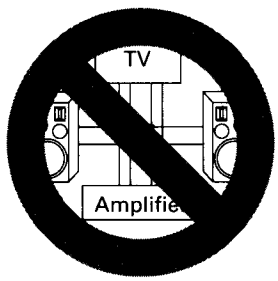


2 Set the MAIN SPEAKER switch to "EXT".
The built-in TV speakers are disconnected.

MAIN SPEAKER
EXT INT

CAUTIONS:

- Do not connect external speakers to more than one audio source at a time. You will damage your equipment if you connect the same speaker system to both the TV and amplifier.



- Use only external speakers with an impedance rating of 8 ohms and input power of 10 W or greater.

CLEANING AND CARE

WARNING: TV sets use High Voltage. Do not try to remove the cabinet back. Refer servicing to qualified service personnel.

- To clean the TV screen:
  1. First remove the plug from the power outlet to avoid possible shock hazard.
  2. Use a clean cellulose sponge or chamois cloth dampened with a solution of mild detergent and warm water to clean TV screen and trim. Do not use too much water on the TV screen. Water spills into the cabinet may cause damage to the TV. Avoid excess water.
  3. Remove any extra moisture with the same cloth or a dry one.

- To maintain the finish and appearance of the cabinet, polish it from time to time with a quality furniture polish.

Note: Never use strong solvents such as thinner, benzene or other chemicals on or near cabinet, as they might damage the finish of the cabinet.

SPECIFICATIONS

TELEVISION SYSTEM:	NTSC standard
CHANNEL COVERAGE:	VHF; 2 through 13 UHF; 14 through 69 Cable TV; mid band (A-8 through A-1, A through I) super band (J through W) hyper band (AA through ZZ, AAA, BBB) ultra band (65 through 94, 100 through 125)
POWER SOURCE:	120V AC, 60Hz
POWER CONSUMPTION:	130W (average)
AUDIO POWER:	10W + 10W
SPEAKER TYPE:	Two 2-3/4 "× 5-1/4" square
VIDEO/AUDIO TERMINALS:	S-VIDEO INPUT Y-INPUT: 1Vp-p, 75 ohm, negative sync. C-INPUT: 0.286V (p-p) (burst signal), 75 ohm VIDEO 1/VIDEO 2/VIDEO 3 INPUT VIDEO: 1V(p-p), 75 ohm, negative sync. AUDIO: 150mV (rms) (30% modulation, 47k ohm) VARIABLE: AUDIO OUTPUT 0-350mV (rms) (30% modulation, 4.7k ohm) EXTERNAL SPEAKER TERMINALS Accept speakers of impedance 8 ohm,input power 10W or greater
DIMENSIONS:	Width.....36-17/32 inches (928mm) Height.....32-1/4 inches (819 mm) Depth.....23-47/64 inches (603mm)
MASS	196 lbs. (89.1 kg)
SUPPLIED ACCESSORIES:	Remote Control Unit with 4 size "AAA" batteries Antenna adapter

Design and specifications are subject to change without notice.

BEFORE CALLING SERVICE PERSONNEL

Before calling service personnel, please check the following chart for a possible cause of the problem you are experiencing. A minor adjustment on your part may eliminate the problem and restore your TV reception.

Symptoms	Check	Adjustments
● No picture, no sound	●Be sure power cord is plugged in. ●May be station trouble. ●Check antenna connections. ●Check antenna for broken wires.	● Press POWER button. ● Try another channel.
● No sound, picture OK	●May be station trouble. ●Check if SPEAKERS ON/OFF function (page 41) or SPEAKER SELECT switch (page 42) is properly set.	● Try another channel. ● Adjust VOLUME.
● Poor sound, picture OK	●May be station trouble. ●Check antenna connections. ●May be local interference from appliance.	● Try another channel. ● Adjust VOLUME. ● Adjust BASS, TREBLE, or BALANCE control. ● Re-orient antenna.
● Poor picture, sound OK Snowy picture Lines in picture Distorted picture Weak picture	●May be local interference from appliance. ●Check antenna connections. ●Check antenna for broken wires. ●May be station trouble.	● Try another channel. ● Adjust BRIGHTNESS. ● Adjust CONTRAST. ● Adjust SHARPNESS. ● Re-orient antenna.
● Poor reception of broadcast channels	●Check antenna connections. ●Check antenna for broken wires. ●If VCR is connected, check TV/VCR switch.	● Try another channel. ● Re-orient antenna.
● No UHF, VHF OK	●Be sure TV•CABLE function (page 18) is in "TV" mode.	
● Unable to select a certain channel	●That channel may be locked out with CH LOCK function (page 28).	
● Multiple images (ghosts)	●May be station trouble. ●Check antenna connections.	● Try another channel. ● Re-orient antenna.
● Poor color or No color	●May be station trouble. ●Check antenna connections. ●Check antenna for broken wires. ●May be local interference from appliance. ●Check if station is broadcasting in color.	● Try another channel. ● Re-orient antenna. ● Adjust TINT. ● Adjust COLOR.
● Weak and noisy stereo program	●Check antenna connections. ●Check antenna for broken wires.	● Re-orient antenna. ● Try pressing MTS button in MONAURAL mode.
● No stereo or SAP sound from a known MTS broadcast	●Check if MTS button is properly set.	
● Remote control does not work	●Check if CABLE, VCR or TV button is properly set. ●Be sure power cord is plugged in. ●Check battery in Remote Control.	● Change batteries.

LIMITED WARRANTY

Toshiba America Consumer Products,Inc. ("TACP") and Toshiba Hawaii Inc. ("THI") make the following limited warranties. These limited warranties extend to the original consumer purchaser or any person receiving this set as a gift from the original consumer purchaser and to no other purchaser or transferee.

Limited One (1) Year Warranty
TACP and THI warrant this product and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. During this period, TACP and THI will repair a defective product or part, without charge to you. "Authorized TACP/THI service station personnel will come to you home when warranty services required. Depending on the type of repair required, the service will either be performed in your home or the set will be taken to the authorized TACP/THI service station for repair and returned to your home at no cost to you."

Limited Two (2) Year Warranty of Picture Tube
TACP and THI further warrant the picture tube in this product against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. During this period, TACP and THI will replace a defective picture tube without charge to you, except that if a defective picture tube is replaced after one (1) year from the date of the original retail purchase, you pay labor charges involved in the replacement.

Owner's Manual and Registration Card
You should read this owner's manual thoroughly before operating this product. You should also insure that your name and address are on file as owner's of a TACP/THI product by completing and mailing the enclosed registration card within ten days after you, or the person who has given you this product as a gift, purchased this product. This is one way to enable TACP/THI to provide you with better customer service and improved products. Failure to return the card will not affect your rights under this warranty so long as you retain other proof of purchase such as a bill of sale.

Your Responsibility
The above warranties are subject to the following conditions:
(1) You must retain your bill of sale or provide other proof of purchase.
(2) All warranty servicing of this product must be made by an Authorized TACP/THI Service Station.
(3) These warranties are effective only if the product is purchased and operated in the U.S.A.
(4) Labor service charges for set installation, set up, adjustment of customer controls and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
(5) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any product or parts which have been lost or discarded by you or to damage to products or parts caused by misuse, accident, improper installation, improper maintenance or use in violation of instructions furnished by us; or to units which have been altered or modified without authorization of TACP/THI or to damage to products or parts there of which have had the the serial number removed, altered, defaced or rendered illegible.

Step-By-Step Procedures-How to Obtain Warranty Service

If, after following all of the operating instructions in this manual and checking the section "BEFORE CALLING SERVICE PERSONNEL", you find that service is needed:
(1) Contact one of the TACP/THI Service Centers listed below for warranty service or call the TACP toll free number **800-631-3811** within thirty (30) days after you find a defective product or part to find the nearest TOSHIBA Authorized Service Station or authorized TOSHIBA Dealer.
(2) Please present your bill of sale or other proof to the Authorized Service Station. "Authorized TACP/THI service station personnel will come to you home when warranty services required. Depending on the type of repair required, the service will either be performed in your home or the set will be taken to the authorized TACP/THI service station for repair and returned to your home at no cost to you."
(3) If you have any question about service, please contact one of the following TACP/THI Service Centers:

IN THE CONTINENTAL UNITED STATES
Should your unit require service, Call

NORTHEAST	MIDWEST	WEST	SOUTHEAST	SOUTHWEST	HAWAII
82 Totowa Road, Wayne, New Jersey 07470	1010 Johnson Drive, Buffalo Grove, Illinois 60089-6900	5490 E.Francis St., Ontario, California 91761	6115 Jimmy Carter Blvd., Suite C2, Norcross, Georgia 30071-4607	1421 Champion Drive, Suite 304,Carrollton, Texas 75006	327 Kamakee Street, Honolulu, Hawaii 96814

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NO EVENT SHALL TACP OR THI BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation may mot apply to you.

No person, agent, distributor, dealer, service station or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of TACP and THI arising under this warranty or under any statute, or law of the United States or any state thereof, is hereby limited to one year from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law. Some states do not permit limitation of the time within which you may bring an action beyond the limits provided by state law so the above provision may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

TOSHIBA AMERICA CONSUMER PRODUCTS, INC.

HEAD OFFICE/82 TOTOWA ROAD, WAYNE, NEW JERSEY 07470
FACTORY SERVICE CENTERS/NORTHEAST: 82 TOTOWA ROAD, WAYNE, NEW JERSEY 07470
MIDWEST: 1010 JOHNSON DRIVE, BUFFALO GROVE, ILLINOIS 60089-6900
WEST: 5490 E. FRANCIS ST., ONTARIO, CALIFORNIA 91761
SOUTHWEST: 1421 CHAMPION DRIVE, SUITE 304 CARROLLTON, TEXAS 75006
SOUTHEAST: 6115 JIMMY CARTER BLVD., SUITE C2, NORCROSS, GEORGIA 30071-4607

TOSHIBA HAWAII, INC.

HEAD OFFICE/327 KAMAKEE STREET, HONOLULU, HAWAII 96814,U.S.A. PHONE: (808)521-5377

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